

**CASE**

**NUMBER:**

99-056

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

RECEIVED

APR 13 1999

PUBLIC SERVICE  
COMMISSION

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND )  
ELECTRIC COMPANY AND KENTUCKY )  
UTILITIES COMPANY FOR A CERTIFICATE )  
OF CONVENIENCE AND NECESSITY FOR )  
THE ACQUISITION OF TWO 164 MEGAWATT )  
COMBUSTION TURBINES )

CASE NO. 99-056

RESPONSE TO  
INFORMATION REQUESTED BY  
THE ATTORNEY GENERAL

FILED: APRIL 13, 1999

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-1**

Responding Witness: Lonnie E. Bellar

- Q-1. In the cover letter of the application addressed to Ms. Helton, on page 2, Mr. Willhite states average monthly power prices for summer months in the Midwest. With respect to those prices, please provide the following:
- a. Are these prices spot prices or contract sales prices?
  - b. Are these prices on-peak, off-peak or an average of all prices during the month?
  - c. Are the prices for power delivered to Cinergy, if not, what is the delivery point?
  - d. What is the source of these figures?
  - e. Please provide a similar average Midwest power price for each month of the last 5 years.
  - f. Please provide all calculations used to develop these figures.
  - g. How much power and at what price was power purchased by each of the two Applicants during June and July of 1998.

A-1.

- a. The cover letter refers to several prices on page 2. The \$7,500/MWh price was reported in the Staff Report to the Federal Energy Regulatory Commission on the Causes of Wholesale Electric Pricing Abnormalities in the Midwest During June 1998, a report produced by an interdisciplinary team of FERC staff on September 22, 1998. Specifically, the report states on page 3-14 that "one utility reported paying a high of \$7,500 per MWh for 50 MW of energy on the afternoon of June 25 [1998]." This is the same hourly spot price that Mr. Kasey refers to on page 5 of his testimony, and is the price now commonly recognized as the highest hourly energy price paid in 1998.

The other prices are average daily spot market prices as reported by Power Markets Week, an industry publication whose staff conducts telephone surveys of utilities and marketers to collect price data on a daily basis. The prices reflect the average of day-ahead transactions for On-Peak energy (Monday through Friday, hours ending 8 through 23 Eastern Prevailing Time,

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-1 (continued)**

Responding Witness: Lonnie E. Bellar

excluding holidays) delivered into Cinergy.

It should be noted that Mr. Willhite's reference to the July 1997 summer price of \$59/MWh should read \$56/MWh.

- b. See the response to part a.
- c. See the response to part a.
- d. See the response to part a.
- e. Average monthly power prices first became available from Power Markets Week in January of 1996. At that time, the prices were reported as a single average price for the entire East Central Area Reliability Coordination (ECAR) region. Average prices for power delivered into Cinergy became available in January 1997. The average monthly prices for ECAR or Cinergy for January 1996 through March 1999 are listed in the attached table.
- f. These monthly figures were developed by averaging the reported daily prices for all days in the given month. The reported daily price is the capacity-weighted average price of all day-ahead transactions according to the Power Markets Week telephone survey; the average monthly price is the sum of reported daily prices for each business day of the month divided by the number of business days in the month.
- g. The power purchase data for LG&E and KU for June and July of 1998 is listed in the attached tables.

## Average Monthly Prices: *Power Markets Week*

Prices are monthly average of 1x16 prices in \$/MWh determined by telephone survey

<u>MONTH</u>	<u>ECAR</u>	<u>Cinergy</u>
Jan-96	\$20.65	N/A
Feb-96	\$24.03	N/A
Mar-96	\$23.11	N/A
Apr-96	\$19.40	N/A
May-96	\$21.79	N/A
Jun-96	\$27.06	N/A
Jul-96	\$27.21	N/A
Aug-96	\$25.87	N/A
Sep-96	\$18.73	N/A
Oct-96	\$18.06	N/A
Nov-96	\$24.92	N/A
Dec-96	\$21.99	N/A
Jan-97	\$23.43	\$23.20
Feb-97	\$17.20	\$16.62
Mar-97	\$17.75	\$17.22
Apr-97	\$19.87	\$19.61
May-97	\$17.33	\$16.83
Jun-97	\$28.19	\$28.93
Jul-97	\$56.63	\$56.05
Aug-97	\$21.18	\$20.83
Sep-97	\$18.87	\$18.60
Oct-97	\$27.43	\$27.30
Nov-97	\$26.03	\$25.87
Dec-97	\$19.54	\$19.41
Jan-98	\$17.24	\$17.17
Feb-98	\$16.39	\$16.27
Mar-98	\$23.63	\$23.64
Apr-98	\$21.09	\$21.07
May-98	\$47.05	\$47.06
Jun-98	\$262.04	\$262.05
Jul-98	\$148.63	\$148.63
Aug-98	\$39.14	\$39.10
Sep-98	\$32.35	\$32.35
Oct-98	\$19.67	\$19.65
Nov-98	\$22.60	\$20.32
Dec-98	N/A	\$19.20
Jan-99	N/A	\$21.55
Feb-99	N/A	\$17.64
Mar-99	N/A	\$20.59

**KU and LGE Purchases for Native Load: June 1998**

Counterparty	Purchases for KU			Purchases for LG&E		
	Volume (MWh)	Cost (Total \$)	Avg. Price (\$/MWh)	Volume (MWh)	Cost (Total \$)	Avg. Price (\$/MWh)
AMOCO-ENERGY	250	\$6,500	26.00	0	\$0	0.00
AQUILA	0	\$0	0.00	17	\$204	12.00
KOCH	0	\$0	0.00	54	\$540	10.00
OVEC	3,858	\$61,728	16.00	1,696	\$27,136	16.00
CE	241	\$6,266	26.00	0	\$0	0.00
<b>TOTAL</b>	<b>4,349</b>	<b>\$74,494</b>	<b>17.13</b>	<b>1,767</b>	<b>\$27,880</b>	<b>15.78</b>

**KU and LGE Purchases for Native Load: July 1998**

Counterparty	Purchases for KU			Purchases for LG&E		
	Volume (MWh)	Cost (Total \$)	Avg. Price (\$/MWh)	Volume (MWh)	Cost (Total \$)	Avg. Price (\$/MWh)
AEP	63	\$2,394	38.00	2	\$76	38.00
DLD	2	\$30	15.00	5	\$75	15.00
ENRON	40	\$480	12.00	0	\$0	0.00
OVEC EXCESS	1315	\$21,040	16.00	947	\$15,152	16.00
<b>TOTAL</b>	<b>1,420</b>	<b>\$23,944</b>	<b>16.86</b>	<b>954</b>	<b>\$15,303</b>	<b>16.04</b>

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-2**

Responding Witness: Lonnie E. Bellar

Q-2. In the application on page 6, it is stated that the new CTs are expected to have an annual capacity factor of 3.4% to 5.3% for the next 5 years. With respect to these figures, please provide the following:

- a. Please provide the projected capacity factor for each of the two new CTs for each of the first 20 years of their use.
- b. Please provide the projected capacity factors for KU and LG&E's existing units for the first 20 years of the new CTs' use.
- c. For an average projected year, please provide the projected load factors for each month of the year.

A-2.

- a. Please see the attached table.
- b. Please see the attached table.
- c. Please see the attached table.

Projected capacity factors for new ABB GT24A CTs

Company	Station	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
KU/LGE	Brown 6	0.9%	2.7%	3.3%	3.8%	3.8%	2.6%	1.5%	1.9%	1.2%	1.4%	1.7%	1.3%	1.4%	1.0%	1.3%	1.1%	1.6%	1.0%	1.4%	1.1%	1.2%
	Brown 7	1.8%	4.2%	4.6%	5.8%	6.5%	4.2%	3.0%	3.0%	2.1%	2.4%	3.0%	2.7%	2.9%	2.1%	2.5%	2.6%	2.8%	2.0%	2.7%	2.4%	2.7%

LG&E and KU existing unit projected capacity factors with new ABB GT24A CTs

Company	Station	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
LGE	Cane Run 4	61.8%	57.4%	62.3%	57.9%	65.8%	54.8%	44.4%	50.7%	54.9%	53.9%	54.1%	61.1%	57.0%	64.0%	52.9%	60.0%	60.8%	66.5%	62.7%	63.1%	69.6%
	Cane Run 5	60.2%	65.9%	60.2%	60.8%	66.5%	59.5%	60.4%	55.7%	60.0%	52.1%	60.0%	62.7%	59.8%	64.8%	59.8%	59.8%	64.3%	61.5%	63.3%	68.6%	62.3%
LGE	Cane Run 6	55.3%	54.4%	56.6%	53.9%	50.9%	54.9%	44.3%	50.5%	46.6%	49.6%	49.7%	52.9%	46.7%	52.8%	55.0%	52.6%	58.7%	54.8%	53.7%	60.7%	51.4%
	Cane Run 11	0.1%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
LGE	Mill Creek 1	53.5%	53.2%	48.4%	61.2%	58.2%	54.4%	51.6%	52.3%	58.4%	52.7%	57.1%	65.6%	60.3%	63.3%	68.9%	65.4%	59.8%	73.1%	67.9%	68.1%	72.1%
	Mill Creek 2	62.6%	43.5%	51.9%	49.5%	62.2%	51.6%	44.9%	53.5%	50.7%	60.5%	61.2%	58.4%	60.4%	67.8%	62.7%	64.9%	71.0%	61.5%	67.6%	74.8%	69.4%
LGE	Mill Creek 3	67.6%	65.7%	74.5%	62.9%	70.4%	74.3%	64.1%	67.9%	74.1%	69.3%	76.1%	65.1%	70.7%	71.6%	78.3%	72.5%	74.8%	78.0%	66.9%	76.8%	78.6%
	Mill Creek 4	75.8%	65.8%	74.5%	69.4%	69.8%	71.1%	60.9%	66.8%	71.3%	72.9%	68.7%	70.3%	77.0%	65.1%	71.2%	78.4%	72.4%	73.0%	78.9%	71.0%	80.0%
LGE	Ohio Falls	48.8%	48.1%	47.7%	47.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%
	Paddy Run 11	0.3%	0.3%	0.6%	0.4%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
LGE	Paddy Run 12	0.4%	0.2%	0.6%	0.2%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
	Tribble County 1	81.0%	86.7%	81.2%	86.7%	74.3%	83.3%	90.6%	83.3%	83.3%	76.9%	83.5%	86.0%	82.0%	84.0%	86.6%	89.1%	83.8%	86.1%	91.3%	76.9%	83.9%
LGE	Waterside 7	0.1%	0.2%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
	Waterside 8	0.3%	0.3%	0.6%	0.2%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LGE	Zorn 1	0.2%	0.2%	0.5%	0.3%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Brown 1	13.6%	19.9%	23.4%	25.8%	30.6%	21.6%	32.0%	32.9%	37.9%	45.3%	44.0%	49.5%	48.7%	56.7%	51.1%	59.6%	60.7%	63.4%	63.8%	67.1%	68.1%
KU	Brown 2	24.3%	32.2%	30.6%	39.1%	42.7%	43.6%	42.3%	45.9%	46.8%	48.6%	52.8%	50.1%	56.5%	59.7%	60.1%	58.4%	62.7%	66.1%	66.6%	68.2%	69.8%
	Brown 3	41.5%	43.8%	45.7%	47.6%	49.5%	43.7%	47.5%	49.6%	50.1%	54.0%	53.0%	55.1%	58.8%	59.3%	59.7%	61.9%	62.7%	57.7%	64.2%	68.3%	69.6%
KU	Brown 8	1.6%	1.8%	2.4%	2.5%	2.2%	1.3%	0.7%	0.7%	0.6%	0.5%	0.5%	0.7%	0.5%	0.3%	0.2%	0.1%	0.3%	0.1%	0.4%	0.3%	0.2%
	Brown 9	1.2%	1.6%	2.3%	2.4%	1.4%	1.1%	0.5%	0.5%	0.4%	0.4%	0.4%	0.6%	0.1%	0.3%	0.2%	0.0%	0.2%	0.1%	0.4%	0.1%	0.3%
KU	Brown 10	1.1%	1.1%	1.8%	1.8%	1.2%	0.6%	0.4%	0.4%	0.4%	0.4%	0.2%	0.5%	0.1%	0.2%	0.2%	0.0%	0.2%	0.1%	0.3%	0.1%	0.3%
	Brown 11	0.6%	1.1%	1.4%	1.5%	1.0%	0.2%	0.1%	0.3%	0.2%	0.2%	0.2%	0.2%	0.0%	0.2%	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%	0.2%
KU	Dix Dam	26.8%	26.8%	26.6%	26.7%	26.7%	26.8%	26.7%	26.7%	26.6%	26.6%	26.7%	26.7%	26.7%	26.7%	26.7%	26.8%	26.7%	26.7%	26.7%	26.7%	26.7%
	Ghent 1	85.4%	86.5%	86.5%	86.3%	88.3%	88.3%	86.3%	86.2%	86.3%	86.5%	86.3%	86.3%	86.3%	86.5%	86.3%	86.3%	86.3%	86.3%	86.3%	86.3%	86.3%
KU	Ghent 2	47.2%	53.9%	55.7%	56.9%	52.8%	89.2%	87.1%	87.8%	87.9%	88.9%	89.3%	89.3%	89.1%	89.7%	89.5%	89.7%	89.4%	90.1%	89.8%	89.9%	90.0%
	Ghent 3	46.3%	57.7%	59.1%	54.9%	62.4%	55.3%	75.2%	75.3%	75.9%	75.9%	76.1%	76.1%	76.0%	76.8%	77.0%	76.8%	78.2%	78.4%	78.9%	80.2%	79.9%
KU	Ghent 4	53.3%	55.2%	63.6%	64.8%	66.4%	66.4%	74.9%	67.5%	75.9%	77.5%	77.5%	76.5%	76.0%	76.8%	77.0%	77.6%	78.4%	79.2%	78.8%	78.8%	80.6%
	Green River 1	10.4%	11.6%	13.2%	16.0%	18.7%	15.4%	17.2%	20.6%	15.3%	19.7%	19.6%	20.3%	25.7%	28.8%	28.1%	27.9%	27.9%	28.2%	29.9%	29.6%	30.1%
KU	Green River 2	11.2%	12.0%	13.5%	16.5%	15.3%	11.1%	8.8%	17.9%	15.9%	20.9%	20.9%	24.1%	24.4%	23.1%	27.6%	27.1%	26.8%	27.4%	27.8%	28.8%	28.8%
	Green River 3	23.3%	26.5%	26.9%	25.0%	33.3%	20.7%	34.4%	36.2%	38.8%	38.4%	45.6%	46.8%	47.1%	54.5%	52.5%	49.5%	57.0%	61.6%	61.1%	63.8%	66.1%
KU	Green River 4	30.0%	31.7%	33.3%	37.2%	34.9%	34.9%	39.7%	39.7%	41.3%	45.1%	39.4%	46.2%	48.1%	51.8%	51.8%	53.6%	50.6%	58.1%	57.5%	61.2%	61.6%
	Haefling	0.3%	0.3%	0.8%	0.7%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
KU	Lock 7	42.7%	45.7%	45.5%	45.8%	45.7%	45.8%	45.9%	45.9%	45.9%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%
	Pineville 3	18.0%	18.7%	22.2%	22.7%	24.4%	24.6%	29.5%	33.3%	35.5%	35.5%	41.7%	43.0%	46.2%	45.3%	52.4%	56.9%	59.3%	61.0%	62.3%	65.0%	67.2%
KU	Tyrone 1	1.2%	1.4%	1.8%	1.5%	0.5%	0.2%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
	Tyrone 2	0.7%	0.7%	1.6%	1.1%	0.4%	0.2%	0.2%	0.2%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
KU	Tyrone 3	9.7%	11.5%	14.2%	15.1%	18.4%	16.9%	19.1%	21.6%	23.1%	31.2%	33.0%	36.7%	36.3%	42.7%	43.3%	47.3%	49.8%	44.9%	53.0%	56.0%	56.4%

Notes:  
 1) All capacity factors shown are from resource assessment with new ABB GT24A CTs and are based on serving native load only  
 2) Capacity factors are based on monthly ratings as modelled in resource assessment  
 3) Ohio Falls capacity factor is based on 80 MW rating  
 4) 1999 capacity factors for Brown 7 & 6 are for August thru December

2000 Monthly Capacity Factors for Brown 6 and Brown 7 (new ABB GT24A CTs)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Brown 6	2.2%	0.0%	0.2%	3.5%	2.0%	4.5%	11.0%	5.6%	1.1%	0.8%	1.9%	0.3%	2.7%
Brown 7	2.5%	0.6%	2.1%	5.0%	2.6%	5.3%	15.4%	7.4%	1.6%	0.8%	6.3%	1.7%	4.2%

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-3**

Responding Witness: Lonnie E. Bellar

Q-3. The Joint Applicants propose to purchase two CTs from ABB. The CTs already at the Brown site were built by ABB. During the start-up of these existing CTs, one experienced a major failure that resulted in a lengthy shutdown period and extensive repairs. With this in mind:

- a. Why have the applicants purchased additional units from a company that had previously supplied defective equipment?
- b. Please describe in detail what compensation KU received from ABB for the power that could not be produced while the CTs were off-line for repairs.
- c. Has KU experienced any other problems with these CTs since this major failure? If so, please describe in detail.
- d. Based on the understanding that the two new CTs that are being installed are a new model and considering the problems commonly experienced by new designs of equipment, what provisions have the applicants taken to recover the cost of lost power production if these machines experience a major failure like the last CTs KU purchased from ABB? Will there be recourse against either or both of LG&E Capital and ABB? If so, what is it?

A-3.

- a. ABB worked with KU to correct the initial problems associated with the 11N2 machines at Brown. The problems encountered were corrected. Since then, the machines have performed according to expectations. KU has found ABB to be a professional vendor of this type of equipment that works with customers to resolve problems to the satisfaction of the customer.

The ABB GT24A machines being constructed at Brown are numbers 14 and 15 and are not the same type of machines previously purchased from ABB. (See the attached response to Question PSC-24.)

There are terms in Section 29 of the General Conditions of Sale that serve to protect LG&E Capital or the utilities in the case of non-performance by ABB. See the attached response to Question PSC-17.

- b. While the CTs were being repaired, KU was able to purchase capacity for the needed period with an energy price lower than the dispatch cost of the outaged

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-3 (continued)**

Responding Witness: Lonnie E. Bellar

CTs. This resulted in economic energy being available during the CT outage period. The terms of this settlement are confidential by agreement of the parties and will be provided to the AG upon execution of a Confidentiality Agreement.

- c. KU has had no other significant problems with the ABB 11N2 machines at Brown that required unscheduled shutdown of the units. All concerns at the units have been addressed as part of scheduled maintenance. The CTs have performed according to expectations, especially during periods of increased need during the 1998 summer period.
- d. The penalties and liquidated damages that ABB is subject to are discussed in Appendix A of the ABB Contract (General Conditions of Sale), Section 29 (included in Exhibit 3a of the Application filing and attached hereto). There will be no recourse against LG&E Capital.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-24

Responding Witness: Lonnie E. Bellar

Q-24. Has this ABB 164MW CT proposed in your application been tested and in operation in the USA? If yes, provide the following information.

- a) How long has this CT been in operation?
- b) How many of these CTs have been installed?
- c) Has any problem been encountered with this model?
- d) What kinds of fuel will this CT require?
- e) If natural gas is the primary fuel to be used, will additional pipeline need to be constructed? Explain.

A-24.

- a) There is one other GT24 in commercial operation in the US at this time, located at the Gilbert Station in New Jersey. This is the prototype machine for this model. After an extensive testing program by the manufacturer, it was placed into commercial operation in December 1997. Currently the machine has logged nearly 2,000 fired hours and 350 starts.
- b) The serial numbers of our machines are #14 and #15. Besides the unit at Gilbert, eight have been installed in Korea. Six of the Korean units have been commercial since approximately August of 1998. The other two units were in the commissioning phase and delayed when the Korean economy suffered its serious downturn; they have been commercial since late last year. Four units are in the commissioning phase in Taiwan.  
There are five other units currently in construction in the US, excluding the LG&E and KU units; one is in Massachusetts and the other four are in Texas.
- c) There have been no major problems with this model.
- d) Natural gas will be the primary fuel; No. 2 fuel oil will be the back-up fuel.
- e) A new 650 psig gas line is being constructed at the existing reducing station at the E. W. Brown site to the new units. This new pipeline is approximately 2,300 feet in length and is located entirely on KU's property. The cost of this pipeline has been included in the Resource Assessment evaluation. The new line is required because of the higher gas delivery pressure requirements of the GT24s compared to the existing CTs at Brown, which require approximately 400 psig of gas delivery pressure.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-17

Responding Witness: Ronald L. Willhite

Q-17. Refer to Exhibit 3a of the Application, the General Conditions of Sale between ABB Power Generation, Inc. and LG&E Capital Corp.

- a) When was this agreement executed?
- b) Provide a copy of the October 2, 1998 letter from C. A. Markel to Chris Broemmelsiek, which is referenced in the "General" section of the agreement.
- c) Explain in detail why only a portion of this document was included in the application.
- d) Provide copies of the entire General Conditions of Sale document.

A-17.

- a) November 2, 1998.
- b) A copy of this October 2, 1998 letter is attached to this response.
- c) The application contained the essential terms of the contract called General Conditions of Sale. The appendices to this contract support the General Conditions of Sale and contain information provided by ABB which that company has designated as confidential and proprietary.
- d) Copies of the requested document are being provided under separate cover. The information is confidential and proprietary and not available for public disclosure. The information is being filed with the Commission pursuant to a petition for confidential treatment.

ITEM NO. PSC-17  
PAGE 1 OF 3  
WITNESS Willhite

October 2, 1998

**Charles A. Markel**  
Vice President - Finance  
and Treasurer

Mr. Chris Broemmelsiek  
Vice President  
ABB Power Generation Inc.  
5309 Commonwealth Centre Parkway  
Midlothian, VA 23112

**LG&E Energy Corp.**  
220 West Main Street  
P.O. Box 32030  
Louisville, Kentucky 40232  
502-627-2203  
502-627-3939 FAX  
charles.markel@lgeenergy.com

Ladies and Gentlemen:

This letter, when executed by you and returned to the undersigned by facsimile at 502-627-3367 shall constitute a binding letter of intent between ABB POWER GENERATION INC. ("Seller") and LGE Capital Corp. ("Buyer"), pursuant to which Seller intends to sell to Buyer, and Buyer intends to purchase from Seller, two GT 24 Simple Cycle Gas Turbines and auxiliaries (the "Equipment") more particularly described in the ABB Proposal dated August 27, 1998 (the "Proposal"), which is subject to further negotiation and modification by the parties and will reflect an "equipment only" instead of a turn-key contract, on the terms and conditions set forth in (i) the Proposal, (ii) the General Conditions of Sale attached hereto, subject to further negotiation and modification (iii) the Scope of Work provided by ABB on October 1, 1998, (iv) *CRB* the Term Sheet dated October 1, 1998, and (v) such detailed terms as to equipment specifications, delivery schedules, performance criteria and related technical data as the parties may negotiate to be set forth in a Purchase Order to be negotiated between the parties on or before October 13, 1998. If the parties are unable in good faith to negotiate the terms of the Proposal, the Purchase Order and General Conditions of Sale on or before October 13, 1998, this Letter of Intent shall terminate.

*attached to the  
ABB Terms Sheet  
dated 10/1/98  
CRB*

Buyer and Seller shall seek to reach agreement on a "MOU" memorandum of understanding, based on a reasonable efforts basis to provide Seller the "right of first opportunity" for Buyer to purchase equipment and or turnkey plants for the following projects:

- Petrobras Project in Brazil
- Next combined cycle project in U.S. that will use multiple gas turbines with individual ratings greater than 150 megawatts
- Brown station (KU) extension 1x1 1N2 simple cycle

*CRB*

*"right of first opportunity" MOU on the above three project*

The foregoing shall be subject to approval of Buyer's partners and regulatory authorities. Failure of the parties to enter into a memorandum of understanding with regard to such projects by October 13, 1998 shall not subject the sale of the Equipment described above to termination.

Upon receipt by Buyer of a signed copy of this letter, Buyer shall transfer \$10,000,000 by wire transfer to Seller's account on October 2, 1998, which amount shall be applied in full to the purchase price for the Equipment. If the parties are unable in good faith to negotiate the terms of the Purchase Order on or before October 13, 1998, the \$10,000,000 shall be refunded to Buyer less a "cancellation fee" consisting of (i) any external supplier costs incurred by ABB to any

other party (including affiliates of ABB) between October 2 and October 13 in preparation for this transaction and (ii) \$500,000 per month for each month (prorated to the actual number of days in a month) beginning as of October 13, 1998, that the Equipment remains unsold (reducing to \$250,000 per month if one turbine is sold) up to a maximum of \$5,000,000. ABB shall have a good faith duty to mitigate the cancellation fee. Until October 13, 1998, (unless an extension is mutually agreed to by the parties), Seller shall take the Equipment off the market and not negotiate its sale with third parties.

Sincerely,

LGE Capital Corp.  
By Colman  
Title Chief Financial Officer

AGREED TO:

ABB POWER GENERATION INC.

By Christopher J. Grandjean  
Title: Vice President  
10/2/98  
6:30pm EDT

mlg/vnjg:85  
F:\USERS\085\LG&EKY\UTIL\INVENT.LTR  
10/2/98

ITEM NO. PSC-17  
PAGE 3 OF 3  
WITNESS Willhite

CAPITAL; DOWNTIME COSTS; COST OF ELECTRIC POWER OR CLAIMS OF THIRD PARTIES OR CUSTOMERS FOR SERVICE INTERRUPTIONS. THIS SECTION 26.2 SHALL NOT BE DEEMED TO DIMINISH OR NEGATE THE REMEDIES AVAILABLE TO EITHER PARTY IN THE EXPRESS PROVISIONS OF THIS CONTRACT.

26.3. Except as expressly provided herein, this Limitation of Liability Article shall prevail over any conflicting or inconsistent provisions contained in any documents comprising the Contract; except to the extent such conflicting or inconsistent provisions further restrict such party's liability.

27. **NON-WAIVER**

The failure of either party to insist upon or enforce, in any instance, strict performance by the other party of any provision or to exercise any right herein conferred shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon any such provision or rights on any future occasion.

28. **ACCEPTANCE OF CONTRACT**

The parties hereto agree that they have not been induced to enter into this Contract by any representations, statements or warranties by the other party other than those expressed herein or in any other document comprising this Contract. Neither party makes any guarantee nor assumes any liabilities except as specifically stated herein.

29. **LIQUIDATED DAMAGES**

The parties acknowledge that the failure of ABB to properly perform certain of its obligations shall subject Purchaser to damages and losses that are not capable of being accurately measured or determined under presently known or anticipated facts and circumstances. Accordingly, the following provisions reflect the parties' agreement to estimate and liquidate such damages, not as a penalty, but rather as an exclusive remedy of Purchaser for ABB's failure to perform the identified responsibilities set forth below:

29.1. Failure to Timely Deliver Documents

- (a) (a) If ABB fails to deliver completed documents specified as "Critical" in Appendix J, as required by this Contract on or before the date specified for submittal on Appendix J, ABB shall be liable to Purchaser in the amount of \$500 for each calendar day that each such document delivery is late. The dates specified in Appendix J are subject to adjustment in accordance with the terms of this Contract.
- (b) (b) Purchaser agrees that the liquidated damages to be paid to Purchaser pursuant to Section 29.1(a) constitute the exclusive liability of ABB for its failure to deliver such documents in a timely manner and the payment of such liquidated damages is the exclusive remedy of Purchaser

AM  
JRP

therefor. In no event shall liquidated damages pursuant to Section 29.1(a) exceed \$50,000.

**29.2. Failure to Timely Deliver Equipment**

- (a) (a) If ABB fails to complete delivery of any portion of the Equipment as required by the provisions of this Contract within the time requirements specified therefor in Appendix F, ABB shall be liable to Purchaser in the amount of \$30,000 per calendar day for each calendar day that any one (1) or more portions of the Equipment specified in Appendix F are late. The dates specified in Appendix F are subject to adjustment in accordance with the terms of this Contract.
- (b) (b) Purchaser agrees that the liquidated damages to be paid to Purchaser pursuant to Section 29.2(a) constitute the exclusive liability of ABB and the payment of such liquidated damages is the exclusive remedy of Purchaser for ABB's failure to deliver portions of the Equipment in a timely manner as provided in Appendix F. Liquidated damages paid pursuant to Section 29.2(a) shall not exceed \$30,000 a calendar day or a maximum of five percent (5%) of the Contract Price.

**29.3. Failure to Achieve Substantial Completion By Guaranteed Substantial Completion Date**

- (a) (a) If ABB does not achieve Substantial Completion by the Guaranteed Substantial Completion Date, ABB shall be liable to Purchaser in the amount of \$25,000 for each Unit for each calendar day for the first fifteen (15) calendar days, and thereafter, \$50,000 for each Unit for each calendar day until Substantial Completion is achieved, provided, however, if the requirements of Substantial Completion have been met in every respect, except that only one Unit is complete and capable of being placed in service by Operator, liquidated damages shall only apply to the uncompleted Unit until Substantial Completion is achieved.
- (b) (b) Purchaser agrees that the liquidated damages to be paid to Purchaser pursuant to Section 29.3 shall constitute the exclusive liability of ABB and the payment of such liquidated damages is the exclusive remedy of Purchaser for ABB's failure to timely achieve Substantial Completion. In no event shall liquidated damages paid pursuant to Section 29.3 exceed twenty percent (20%) of the Contract Price.

**29.4. Performance Liquidated Damages.**

- (a) (a) The parties agree that it would be extremely difficult and impracticable under the presently known and anticipated facts and circumstances to ascertain the actual damages Purchaser would incur

should ABB fail to successfully achieve the Guaranteed Net Power Output and the Guaranteed Net Heat Rate, as demonstrated in Performance Tests conducted therefor, on or before the Guaranteed Final Completion Date. Accordingly, the parties hereby agree that if ABB fails to successfully achieve the Guaranteed Net Power Output and the Guaranteed Net Heat Rate by the Guaranteed Final Completion Date, then Purchaser's exclusive remedy for such failure shall be to recover from ABB as liquidated damages, and not as a penalty, those amounts identified below; it being acknowledged and agreed by the Parties hereto that the liquidated damages identified in this Section 29.4 relate solely to ABB's failure achieve the Guaranteed Net Power Output and the Guaranteed Net Heat Rate by the Guaranteed Final Completion Date.

- (i) Guaranteed Net Gas Power Output: ABB shall pay for its failure to achieve the Guaranteed Net Gas Power Output, as liquidated damages and not as a penalty, amounts calculated as follows:

$\{GNPO \text{ (at Guaranteed Operation Conditions)} - (\text{Net Power Output (kW)} \text{ corrected to Guaranteed Operating Conditions}) \times \$380$

In the event the result of the calculation is less than zero, it shall be adjusted to zero.

- (ii) Guaranteed Net Oil Power Output: ABB shall pay for its failure to achieve the Guaranteed Net Oil Power Output, as liquidated damages and not as a penalty, amounts calculated as follows:

$GNPO \text{ (at Guaranteed Operation Conditions)} - (\text{Net Power Output (kW)} \text{ corrected to Guaranteed Operating Conditions}) \times \$380$  \$1.00 (one dollar)

In the event the result of the calculation is less than zero, it shall be adjusted to zero.

- (iii) Guaranteed Net Gas Heat Rate: ABB shall pay for a failure to achieve the Guaranteed Net Gas Heat Rate as liquidated damages and not as a penalty, an amount calculated as follows:

actual Net Heat Rate (Corrected to Guaranteed Operation Conditions) - GNHR x \$10,000

In the event the result of the calculation is less than zero, it shall be adjusted to zero.

- (iv) Guaranteed Net Oil Heat Rate: ABB shall pay for a failure to achieve the Guaranteed Net Oil Heat Rate as liquidated damages and not as a penalty, an amount calculated as follows:

AM  
JAL

actual Net Heat Rate (Corrected to Guaranteed Operation  
Conditions) - GNHR x \$1.00 (one dollar)

In the event the result of the calculation is less than zero, it shall be adjusted to zero.

It is further provided that payment of liquidated damages for (i) failure to achieve the Guaranteed Net Heat Rate shall in no event exceed twenty (20%) of the Contract Price and (ii) failure to achieve the Guaranteed Net Power Output shall in no event exceed twenty (20%) of the Contract Price.

- (b) (b) Failure to Achieve the Starting Reliability Guarantee. If, on or after the second anniversary of the Substantial Completion Date, ABB's efforts to make repairs, corrections or replacements to any Unit in order to achieve the Starting Reliability Guarantee for such Unit have not been successful, ABB, at its option, may stop taking corrective action upon notice to Purchaser accompanied by payment of liquidated damages in an amount calculated as follows: \$50,000 for each full percent by which the Starting Reliability Guarantee as determined in accordance with Section 3.5.1 of Appendix E is less than ninety-five percent (95%). Liquidated damages shall be pro-rated for shortfalls below one full percent.
- (c) (c) Failure to Achieve Running Reliability Guarantee. If, on or after the second anniversary of the Substantial Completion Date, ABB's efforts to make repairs, corrections or replacements to any Unit in order to achieve the Running Reliability Guarantee for such Unit have not been successful, ABB, at its option, may stop taking corrective action upon notice to Purchaser accompanied by payment of liquidated damages in an amount calculated as follows: \$50,000 for each full percent by which the Running Reliability Percentage as determined in accordance with Section 3.5.2 of Appendix E is less than ninety-five percent (95%). Liquidated damages shall be pro-rated for shortfalls below one full percent.

29.5. Guaranteed Exhaust Emissions and Guaranteed Sound Emissions: ABB shall achieve the Guaranteed Gas Exhaust Emissions in Performance Tests (conducted by Purchaser) as required by Appendix E, as a condition of achieving Substantial Completion. ABB shall achieve the Guaranteed Exhaust Emissions and Guaranteed Sound Emissions in Performance Tests (conducted by Purchaser) as a condition of achieving Final Completion. In the event that the Equipment fails to achieve the Guaranteed Exhaust Emissions or the Guaranteed Sound Emissions, ABB shall be granted access to the Equipment at time or times mutually acceptable to Purchaser to rectify such failure.

29.6. No Testing Tolerances. In determining performance levels during the Performance Tests, no testing tolerances shall be permitted.

AM  
JAL

29.7. Opportunity to Correct. ABB shall be given opportunities at mutually agreeable time or times which do not interfere with the operational requirements of the Operator (consistent with Section 37.13) after the Performance Tests, to modify the Units which have been demonstrated to be deficient in heat rate, output, emissions, sound or otherwise in order to meet Performance Guarantees therefor. If the Equipment achieves the Threshold Net Heat Rate and the Threshold Net Power Output but fails to achieve the Guaranteed Net Heat Rate and the Guaranteed Net Power Output during a Performance Test, ABB shall be given reasonable access (consistent with Section 37.13) to the Equipment to repair or replace components (or otherwise make corrections) causing performance deficiency. If such repair, replacement or correction period exceeds one hundred eighty (180) calendar days following the Guaranteed Substantial Completion Date, ABB shall be responsible for the differential cost of fuel until the design point is passed in accordance with guarantee requirements or ABB pays liquidated damages required to be paid in accordance with Section 29.4 (a)(iii).

29.8. Payment.

Liquidated damages incurred by ABB pursuant to Sections 29.1, 29.2, or 29.3 shall be paid to Purchaser on or before the thirtieth (30<sup>th</sup>) calendar day of the calendar month following the calendar month in which such liquidated damages were incurred. Except as otherwise provided, other liquidated damages for which ABB is liable hereunder shall be paid to Purchaser within thirty (30) calendar days of notice to ABB. Failure of ABB to make payment of liquidated damages in accordance herewith shall entitle (but not obligate) Purchaser to withhold such damages from other amounts due to ABB hereunder or deduct such damages from the Retainage.

29.9. Bonus. For the first Unit, Purchaser shall pay to ABB a bonus in the amount of \$25,000 for each calendar day on or after June 15, 1999 (up to a maximum of forty-six (46) calendar days), by which ABB turns over to Purchaser a fully completed Unit meeting the requirements of Substantial Completion (as it would be adjusted if it applied to only one Unit) that is capable of being placed in service by Operator prior to August 1, 1999. For the second Unit, Purchaser shall also pay to ABB a bonus in the amount of \$25,000 for each calendar day (up to a maximum of fifteen (15) calendar days) by which Substantial Completion precedes August 1, 1999. Notwithstanding the foregoing, in the event Substantial Completion is not achieved prior to August 1, 1999, no bonus under this Section 29.9 shall be paid to ABB. For purposes of this Section 29.9 only, the August 1, 1999, date set forth in this Section 29.9 is not subject to adjustment for any reason whatsoever including, Purchaser fault, Contractor fault or Force Majeure, and ABB agrees not to dispute, whether under Section 23.2 or otherwise, whether a bonus is payable hereunder on account of thereof.

AR  
JNF

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-4**

Responding Witness: Michael D. Robinson

- Q-4. Please provide a detailed description of all compensation LG&E Capital will receive if this transaction goes through, including but not limited to financing costs during construction. At what interest rate is the project being financed during construction?
- A-4. LG&E Capital Corp. will receive reimbursement of its cost for the construction as well as costs to finance construction of the two CTs. Components of the construction cost, excluding interest, are included on pages 4 and 5 of the Application filed on February 11, 1999. Financing costs during construction are based on LG&E Capital Corp's average monthly commercial paper rate which ranged from 5.330% when construction began in October 1998 to 5.027% in February 1999. From October 1998 through February 1999, LG&E Capital Corp. incurred \$849,093.47 of financing costs on construction of the CTs.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-5**

Responding Witness: Caryl M. Pfeiffer

- Q-5. Exhibit 2 of the Application contains the Air Permit for the Brown Site combustion turbines. On page 1 of 4, the permit lists a condition of a maximum heat input of 1368 mm/BTU per unit. The new units being built are for 181 MW (winter) with a heat rate of 10,500 BTU/kwh, for a projected heat input of 1900 mm/BTU. This appears to be in violation of the Air Permit. What actions have or will the applicant take to rectify this permit violation?
- A-5. There has been no violation of the Air Permit. The air permit to construct, attached to the Application as Exhibit 2, was issued by the Kentucky Division for Air Quality (KYDAQ) for eight, simple cycle combustion turbines (CTs) at 1,368 mmBtu/hr maximum heat input each at International Standards Organization (ISO) standard conditions (59° F). Therefore, the air permit allows for a total of 10,944 mmBtu/hr maximum heat input for the CT site. The maximum heat input of 1,678 mmBtu/hr (at ISO) of the two new, larger ABB CTs, is less than the heat input of three of the smaller ABB CTs originally envisioned for installation at the site. KU has been working with the KYDAQ since October 1998 regarding the air quality impacts from the two new, larger ABB CTs.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-6**

Responding Witness: Lonnie E. Bellar

- Q-6. The proposed CTs have a projected full load heat rate of 10,500 BTU/Kwh. Please provide their projected average heat rate at the projected average capacity factor of 4.2% for the first 5 years.
- A-6. The average heat rate of the proposed CTs for 2000-2004 (the first five full years of operation and the same time period for which the 4.2% capacity factor is projected) is 11,468 BTU/kWh.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-7**

Responding Witness: Lonnie E. Bellar

- Q-7. Exhibit 3a of the Application contains the General Conditions of Sale of the CTs by ABB. Please also provide the actual contract that contains the sale prices and delivery dates.
- A-7. See the attached response to Question PSC-17 in response to Question AG-3. The entire contract was submitted to the PSC on April 1, 1999 subject to a Petition for Confidential Protection. The contract will be made available to the AG pursuant to execution of a Confidentiality Agreement.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-8**

**Responding Witness: Lonnie E. Bellar**

- Q-8. In the Application, Exhibit 4, contains a Site Map. The Site Map contains a drawing for 7 units instead of the 8 units originally proposed. Please provide an explanation of why the plans for an eighth unit have been abandoned.
- A-8. The original site preparation as represented on the referenced Site Map was sufficient to allow for the installation of 8 CTs with center to center spacing of 70 feet. The existing units were installed with this spacing. However, the new CTs have a center to center measurement of 90 feet. Thus, only three additional units of this kind will fit on the site as prepared. Also, as described in AG-5 the Air Permit for the site is a limiting factor. The two new CTs will have a combined capacity of 328 MW, compared to the combined capacity of three existing CTs of 330 MW. The 4 existing ABB 11N2s, 2 proposed ABB GT24s and as yet unknown future unit will utilize the heat input provided for in the existing Air Permit.



LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-9**

Responding Witness: Lonnie E. Bellar

Q-9. A gas pipeline was built to provide natural gas for the first 3 CT units at the Brown site. Is the pipeline sized sufficiently to supply the two new units being built, or will an additional gas pipeline have to be added?

A-9. The pipeline is sized sufficiently to supply the two new units.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-10**

Responding Witness: Lonnie E. Bellar

- Q-10. On page 9 of Mr. Wilhite's testimony, he states that the results of a new RFP will be available in March. Please provide a copy of the RFP and the result of the RFP, including all analysis that lead to any conclusion of the results.
- A-10. See the attached response to Question PSC-23. The RFP responses were submitted to the PSC on April 1, 1999 subject to a Petition for Confidential Protection. The responses will be made available to the AG pursuant to execution of a Confidentiality Agreement.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-23

Responding Witness: Lonnie E. Bellar

- Q-23. Mr. Ronald L. Willhite in his testimony stated, "In fact, the companies have issued request for purchased power for the summers of 1999-2002."
- a) Provide a copy of the request for purchased power "RFPP" which was sent out.
  - b) Provide a list of the recipients of the RFPP.
  - c) Provide a copy of each response to the RFPP and a summary of all responses that ranks the proposals and explains why each was accepted or rejected.
  - d) Since the CTs will be used for a period longer than 1999-2002, explain why your RFPP was limited to the 1999-2002 period instead of a longer period.

A-23.

- a) A copy of the request for purchased power (RFPP) is attached to this response.
- b) The list of recipients is attached to this response. The RFPP was sent to 107 potential suppliers ranging from IOUs, Electric Cooperatives, Large Municipal organizations, and Marketing entities. The RFPP was issued on February 10, 1999.
- c) Copies of the documents described below are included under separate cover. The information is confidential and proprietary and not available for public disclosure. The information is being filed with the Commission pursuant to a petition for confidential treatment.
  - 1) A summary of all responses to the RFPP
  - 2) The individual responses to the RFPP

None of the proposals were accepted. The reasons for rejection and conclusions follow:

- 1) All firm proposals were conditional in that they were immediately subject to price review or expired by February 26, with the exception of Avista (it was sent on 2/26, with a 3/1 expiration). This fact simply confirms what was stated in Mr. Willhite's testimony (page 8, lines 15-16) "we determined that the use of a formal solicitation [RFPP] would not produce useful or reasonable information ..." The results of this RFPP were neither useful or reasonable for use in evaluating the acquisition of combustion turbines.

ITEM NO. PSC-23  
PAGE 1 OF 6  
WITNESS Bellar

- 2) From the prices that were submitted, it was clear that each proposal was more costly than the actively traded market.
  - 3) The prices proposed by all responding parties were higher than those used as estimates in the Resource Assessment, which reinforces the conclusion of the Resource Assessment that the proposed CTs are the least-cost alternative.
  - 4) The RFPP responses, while somewhat higher than the Companies' forecast, confirmed Mr. Bellar's testimony that "the Companies expected their forecast of market prices to be indicative of probable RFP[P] responses (page 5, lines 11-13)".
- d) The RFPP states under Item 2 that power is required for the listed periods (June, July and August of 1999-2002). However, the RFPP also states that "proposals of any duration are acceptable." Thus, while particular attention was given to the 1999-2002 period, the proposal was not expressly limited to that period.

ITEM NO. PSC-23  
PAGE 2 OF 6  
WITNESS Bellar

Charles A. Freibert, Jr.  
Director  
Energy Marketing

502-627-3873  
502-627-3613 FAX

February 10, 1999

## RE: REQUEST FOR PROPOSALS

Dear

Due to increased demand and energy needs, LG&E/KU is requesting proposals for specific power products. It is LG&E/KU's intent to analyze RFPs, determine a cost effective and reliable solution, and execute appropriate contracts in a short timeframe. This RFP is not a commitment to purchase and shall not bind LG&E/KU or any subsidiaries of LG&E Energy Corp in any manner. The bids received will receive serious consideration and the bidders will be personally notified of the status of their proposals.

1. **Capacity Need** – 500MW. Smaller quantities, preferably in 50MW increments, will be considered. Multiple purchases from various suppliers may be executed to meet this need.
2. **Term** – Power is required during the following periods. Proposals of any duration are acceptable.
  - 2.1. June, July and August 1999
  - 2.2. June, July and August 2000
  - 2.3. June, July and August 2001
  - 2.4. June, July and August 2002
3. **Product Descriptions**
  - 3.1. **Option on Index** – LG&E would have the right to schedule by 7:00 a.m. CPT for the next day a standard on peak 16 hour schedule, 07:00 to 22:00 CPT, for the quantity of power offered. The energy price will be based on Power Markets Weekly, Daily "Into Cinergy" index. An index plus or minus a constant structure is acceptable for energy pricing.
  - 3.2. **Peaking Call** – LG&E would have the right to schedule by 10:00 a.m. CPT for the next day for any 4 consecutive hours the quantity of power offered. The desired energy strike price is \$150.00/MWH. However, other strike prices will be evaluated.
  - 3.3. **Sixteen Hour Call** – LG&E would have the right to schedule by 10:00 a.m. CPT for the next day a standard on peak 16 hour schedule, 07:00 to 22:00 CPT, for the quantity of power offered. The desired energy strike price is \$150.00/MWH. However, other strike prices will be evaluated.

ITEM NO. PSC-23  
PAGE 3 OF 6  
WITNESS Bellar

4. **Delivery Point** – Power will be delivered into any available LG&E/KU or Cinergy interface point. The proposal must specify the control area where power will be delivered. The seller is responsible for all cost and tagging required to deliver energy at the delivery point.
5. **Pricing Information** – Pricing will include all existing and future cost associated with the delivery of the power at the specified delivery point. Price quotes will be considered firm during the week of evaluation unless stated otherwise.
6. **Credit Rating** – Bidders will be reviewed to ensure compliance with the LG&E/KU credit criteria. Failure to comply may be remedied by an acceptable letter of credit.
7. **Confidentiality** – LG&E/KU will treat each proposal as confidential during the evaluation process and expects each bidder to agree that the proposal and associated negotiations will be treated as confidential during the evaluation process.

8. **Schedule For the RFP Process**

8.1. Mailing of Request For Proposals	February 10, 1999
8.2. Proposal due date	February 19, 1999
8.3. Completion of Evaluation	February 23, 1999
8.4. Notification to Bidders	February 23, 1999
8.5. Execution of Strategy	February 26, 1999

9. **Contact Information** – LG&E/KU must receive Proposals by 5:00 p.m. EST on Friday, February 19, 1999. Email notification that a proposal has been sent is requested. A signed copy of each proposal sent by email is expected in 2 business days. Please contact Charlie Freibert with all proposal information, questions, or concerns.

Charles A. Freibert, Jr.  
 Director, Energy Marketing  
 LG&E/KU  
 220 West Main Street  
 Louisville, Kentucky 40202

Phone: 502-627-3673  
 Pager: 502-332-1170  
 Email: Charlie.Freibert@lgeenergy.com

In closing, we look forward to your response and are prepared to analyze and evaluate each proposal to determine its value in meeting the LG&E/KU future power needs.

Your interest in this request is greatly appreciated. Please contact us if you have any question whatsoever.

Sincerely,

Charles A. Freibert, Jr.  
 Director, Energy Marketing

ITEM NO. PSC-23  
 PAGE 4 OF 6  
 WITNESS Bellar

**Customers Receiving RFP**

1	AES Power, Inc.	55	Illinova Power Marketing, Inc.
2	Alabama Electric Cooperative, Inc.	56	Indiana Municipal Power Agency
3	Allegheny Power	57	Indianapolis Power & Light Company
4	Ameren Services Company	58	Industrial Energy Applications, Inc.
5	American Electric Power Service Corp.	59	InterCoast Power Marketing Company
6	American Municipal Power - Ohio, Inc.	60	Jacksonville Electric Authority
7	Amoco Energy Trading Corporation	61	K N Marketing, Inc.
8	Aquila Power Corporation	62	Kimball Power Company
9	Associated Electric Co.	63	Koch Energy Trading, Inc.
10	Avista Energy	64	Merchant Energy Group of the Americas, Inc.
11	AYP Energy, Inc.	65	Mid-American Energy Company
12	Big Rivers Electric Corp.	66	MidCon Power Services Corp.
13	Calpine Power Services Company	67	Minnesota Power & Light Company
14	Cargill-Alliant, LLC	68	Morgan Stanley Capital Group, Inc.
15	Carolina Power & Light Company	69	New York State Electric & Gas Corp.
16	Central Illinois Light Company	70	NorAm Energy Services, Inc.
17	Cinergy Services Inc.	71	Northern Indiana Public Service Company
18	Citizens Power Sales	72	OGE Energy Resources, Inc.
19	City Water, Light and Power, Springfield	73	Oglethorpe Power Corporation
20	CMS Marketing, Services & Trading Co.	74	Ohio Valley Electric Corporation
21	CNG Power Services Corp.	75	Pacificorp Power Marketing, Inc.
22	Columbia Energy Power Marketing	76	PECO Energy Company - Power Team
23	Columbia Water & Light Department	77	PG&E Energy Trading-Power, L.P.
24	Commonwealth Edison Company	78	PG&E Power Services Company
25	ConAgra Energy Services, Inc.	79	PP&L, Inc.
26	Constellation Power Source, Inc.	80	Proliance Energy, L.L.C.
27	Coral Power, L.L.C.	81	Public Service Electric & Gas Company
28	Dayton Power & Light Company	82	QST Energy Trading, Inc.
29	Detroit Edison & Consumers Power	83	Rainbow Energy Marketing Corporation
30	DTE Energy Trading, Inc.	84	SCANA Energy Marketing, Inc.
31	Duke Energy Trading & Marketing, LLC	85	Sempra Energy Trading Corporation
32	DuPont Power Marketing, Inc.	86	Sonat Power Marketing L.P.
33	Duquesne Light Company	87	South Carolina Electric & Gas Company
34	East Kentucky Power Cooperative	88	Southern Company Energy Marketing L.P.
35	El Paso Power Services Company	89	Southern Company Services, Inc.
36	Electric Clearinghouse, Inc.	90	Southern Illinois Power Cooperative
37	Electric Energy, Inc.	91	Southern Indiana Gas & Electric Company
38	Energy Authority, The	92	Statoil Energy Trading, Inc.
39	Engage Energy US, L.P.	93	Tallahassee, Florida, City of
40	Engelhard Power Marketing, Inc.	94	Tenaska Power Services Company
41	Enron Power Marketing, Inc.	95	Tennessee Valley Authority
42	Enserch Energy Services, Inc.	96	Tractebel Energy Marketing, Inc.
43	Entergy Power Marketing Corp.	97	TransCanada Power Corp.
44	Entergy Services, Inc.	98	Utilicorp United, Inc.
45	Equitable Power Services Company	99	Utility-Trade Corp., The
46	FirstEnergy Corp.	100	Virginia Electric and Power Company
47	FirstEnergy Trading & Power Marketing	101	Vitol Gas & Electric LLC
48	Florida Power & Light Company	102	Wabash Valley Power Association
49	Florida Power Corporation	103	Western Power Services, Inc.
50	Griffin Energy Marketing, L.L.C.	104	Western Resources, Inc.
51	Hamilton, Ohio, City of	105	Williams Energy Services Company
52	Hoosier Energy	106	Wisconsin Electric Power Company
53	Illinois Municipal Electric Agency	107	WPS Energy Services, Inc.
54	Illinois Power Company		

ITEM NO. PSC-23  
 PAGE 5 OF 6  
 WITNESS Bellar

**Question: PSC-23(c)**

The information in response to this question is subject to a request for confidential protection under 807 KAR 5:001, Section 7. The original filed with the Commission contains the requested information. This information is omitted in all other copies submitted herewith.

ITEM NO. DSC-23  
PAGE 6 OF 6  
WITNESS Bellar

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-11**

Responding Witness: Lonnie E. Bellar

Q-11. Please provide a list of combustion turbines available for purchase today, including manufacturer, size, price, full load heat rate and delivery dates.

A-11. LG&E and KU issued a RFP for combustion turbines on April 1, 1999 and expect responses by April 15, 1999. The companies will submit the responses to the PSC under a Petition for Confidential Protection, shortly after receipt. The companies will provide the responses to the AG pursuant to execution of a Confidentiality Agreement.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-12**

Responding Witness: Lonnie E. Bellar

- Q-12. When LG&E Capital undertook this project last year, was it with the intention to use the CTs as a merchant plant, or was the original intent to eventually sell the units to the Applicants. If the original intent was to sell them to the Applicants, please state why the Applicants did not simply make the purchase.
- A-12. Please see the attached response to Question PSC-1.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-1

Responding Witness: Ronald L. Willhite

Q-1. Refer to Mr. Willhite's testimony, p. 7, lines 8-7. On what date did LG&E and KU determine that the acquisition of the combustion turbines is the best generation resource to meet their combined needs? Provide copies of all internal memoranda, letters, notes, board minutes or other writings which document that date.

A-1. On February 2, 1999, the Operating Committee for LG&E and KU (collectively the Companies) met and determined that the CTs were the best generation resource to meet the Companies' combined needs. The Committee formally approved the Companies' purchase of the CTs from LG&E Capital Corp. on that date. The Committee's determination was the result of several months' evaluation of the CTs by both LG&E Capital Corp. and the Companies, a process that began in the summer of 1998.

As a result of the volatility in the wholesale power market in June and July of 1998, as described in the testimony of James Kasey, LG&E and KU determined that their plans to rely on purchased power to meet incremental margin needs in 1999 should be revisited. Thus, in July of 1998, LG&E and KU began discussions with Black & Veatch as to the availability of combustion turbines (CTs) that could be placed in service by summer 1999. In late August, LG&E and KU received a CT acquisition proposal from ABB. Based on that data, LG&E and KU performed a limited and preliminary revenue requirements analysis which indicated that the CTs would likely be the least-cost alternative for meeting the combined needs of KU and LG&E. However, the time constraints involved with obtaining regulatory approval of the project prevented immediate action on behalf of LG&E and KU.

In September, LG&E Energy Corp. conducted its evaluation of the acquisition of the CTs. The analysis concluded that the CTs were an economically viable acquisition. Based on that conclusion, and to prevent the loss of this acquisition opportunity, LG&E Energy Corp. management took the proactive step of having LG&E Capital Corp. enter into the option agreement with ABB to acquire the CTs.

Subsequently, LG&E and KU performed a detailed and comprehensive revenue-requirements analysis. At the same time, LG&E Capital Corp. undertook an evaluation of the CTs. LG&E's and KU's revenue requirements analysis, which

ITEM NO. PSC-1  
PAGE 1 OF 6  
WITNESS Willhite

was completed in December 1998 and updated in January 1999, has been submitted with the present Application. This analysis demonstrated that the CTs were the least-cost way for the Companies to acquire additional generation resources to help meet their capacity needs. Based on the analyses that had been done by LG&E and KU, the Operating Committee for the Companies met on February 2, 1999 and approved KU's and LG&E's acquisition of the CTs from LG&E Capital Corp. The minutes of the February 2, 1999 meeting are attached to this response.

ITEM NO. PSC-1  
PAGE 2 OF 6  
WITNESS Willhite

**Minutes of Operating Committee Meeting  
February 2, 1999**

Attendees: Members – Wayne Lucas (Chairperson), Steve Wood (LG&E), Chris Hermann (LG&E), Bob Hewitt (KU) [proxy], and Jim Ellington (KU).  
Advisors - Martyn Gallus and Lonnie Bellar.

Subjects: Approval of Combustion Turbine project at E.W.Brown Station and associated Joint Unit ownership shares.

Discussion of RFPs for purchase power and CT construction.

Meeting Summary:

Lonnie Bellar, Manager Generation Systems Planning, summarized the resource assessment which determined that the two ABB GT24 simple-cycle combustion turbines being constructed at the E. W. Brown generation station are the least cost capacity resource for LG&E and KU to meet their respective margin requirements. Martyn Gallus, Vice President of Energy Marketing, discussed the volatility of the wholesale power market and its implications to this analysis. He supported the purchase power assumptions used in the analysis as being representative of the current market. A memo requesting approval of the CTs as a least cost resource and the recommendation to transfer the assets to LG&E and KU was reviewed. Also, outlined in the memo was the recommended ratio share ownership of the CTs, 38% LG&E and 62% KU. It was discussed that per the Power System Supply Agreement (PSSA) schedule A, the committee is required to approve the participation of each utility in jointly owned units. The committee then voted in favor four to zero to transfer the CTs to LG&E and KU in the ratio share of 38% and 62%, respectively. The committee was informed that pending their approval, a CCN requesting the transfer of the CTs to the utilities had been prepared and would be filed as soon a practical.

Further discussion centered on the upcoming RFP for purchase power and RFP for CTs. The committee was informed of the intent to issue these requests and told they would be apprised of the results of the RFPs at a future meeting.

The meeting was adjourned.

ITEM NO. PSC-1  
PAGE 3 OF 6  
WITNESS Willhite

# Memo

**To:** Wayne Lucas, Bob Hewett, Steve Wood, Jim Ellington, Chris Hermann  
**From:** Lonnie Bellar  
**CC:** Jeff Whitaker, John Wolfram  
**Date:** 02/02/99  
**Re:** Ratio Share for CT Cost Allocation

---

As you know, Generation Systems Planning is in the process of completing our Resource Assessment for the new CTs at Brown. Our preliminary studies first completed in November 1998 indicated that the CTs are the least cost alternative for meeting the joint companies' capacity needs for 1999 and into the future. According to definitions in the PSSA, the new CTs are considered "Joint Units." Schedule A of the PSSA states that "ownership shares in each joint unit shall be allocated by the Operating Committee" and that "each company shall be responsible for its pro-rata share of the costs of construction" of such unit(s).

Generation Systems Planning recommends that the Operating Committee formally approve the purchase of the CTs from LG&E Capital Corporation, and use the ratio of 62% KU and 38% LG&E for determining ownership shares of the new CTs. This ratio is based on the results of our most recent evaluation of the Summer 1999 reserve margin requirements, and is consistent with the principles outlined in the PSSA.

Our studies indicate that the following additional capacity is required to meet the 14% joint-company target reserve margin for Summer 1999:

KU	292 MW	62%
LG&E	178 MW	38%
TOTAL	470 MW	100%

The attached spreadsheet includes details of the numerical analysis. The analysis includes forecast supply capabilities, peak loads, interruptible loads, and peak diversity share; the analysis excludes Paris and SEPA.

The attached summary of combined LG&E and KU reserve margin data summarizes the long-term capacity needs required to maintain the 14% target reserve margin. The capacity needs determined herein--and the acquisition of the new CTs to mitigate those needs--are consistent with the resource plans that existed before the merger.

In our Resource Assessment study, we used a 60/40 ratio for the Net Present Value of Revenue Requirements analysis. The 60/40 ratio was based on our preliminary calculation of 1999 reserve margin needs. We have since refined that analysis, resulting in the recommended 62/38 ratio; the change in ratio has no significant impact on the results of the NPVRR evaluation.

ITEM NO. PSC-1  
PAGE 4 OF 6  
WITNESS Willhite

# Kentucky Utilities Company/Louisville Gas and Electric Company

1999 Load/Resource Data: Brown CT Allocation Ratio

	<u>Kentucky Utilities</u>	<u>Louisville Gas &amp; Electric</u>	<u>Total System</u>
Supply Capability (MW)	3,572	2,559	6,131
Firm Purchases	389	0	
SEPA	0	0	
<b>Total Capability</b>	<b>3,961</b>	<b>2,559</b>	<b>6,520</b>
Peak Load (MW)	3,761	2,532	
David Joseph Co.	3	3	
Green River Steel	0	18	
Toyota Main Plant	3	19	
Toyota Expan Plant	4	30	
Teledyne Portland Forge	1	8	
White Stone Company	1	45	
West Virginia P&P Company	0	0	
Lex Fayette Urban Co Gov't	1	0	
Kentucky Processing	5	0	
Paris	0	0	
Total CSR and Paris	18	123	
Net Peak (MW)	3,743	2,409	
Share of Diversity (0.32%)	12	8	
<b>System Peak Contribution (MW)</b>	<b>3,731</b>	<b>2,401</b>	<b>6,132</b>
MW Margin	230	158	388
Reserve Margin %	6.16%	6.57%	6.33%
MW need for 14% Margin	292	178	470
Ratioed Share	62.1%	37.9%	100.0%

Note:

Effects of curtailable loads, interruptible loads and Paris are based on historical averages provided by load forecasting. Actual effect at the time of 1999 system peak may be slightly more/less.

ITEM NO. PSC-1  
 PAGE 5 OF 6  
 WITNESS Willhite

# KU and LG&E Joint Company Loads, Capabilities, and Reserves

02-Feb-99

Joint Company at 14% Reserve Margin and 0.3% Load Diversity

Year	Season	Generating Capacity (MW)	Purchases (MW)					Net Capacity (MW)	Net Forecast Peak Load (MW)	Reserves (MW)	Reserves (%)	Capacity Margin (%)	Unit Addition
			OMU	ELI	CIN	Cal	Phing						
1998	S	6131	194	200	110	50	95	6780	5946	834	14.0%	12.3%	
1998/99	W	6202	194	200	110	0	0	6706	5397	1309	24.3%	19.5%	w/o Phing Purch: 12.4%
1999	S	6459	189	200	0	0	140	6988	6132	856	14.0%	12.3%	Brown 7, Brown 6 328 / 362 MW 08/01/99
1999/0	W	6564	189	200	0	0	0	6953	5518	1435	26.0%	20.6%	w/o Phing Purch: 11.7%
2000	S	6459	187	200	0	0	350	7196	6313	883	14.0%	12.3%	
2000/1	W	6564	187	200	0	0	0	6951	5630	1321	23.5%	19.0%	w/o Phing Purch: 8.4%
2001	S	6459	183	200	0	0	485	7327	6427	900	14.0%	12.3%	
2001/2	W	6564	183	200	0	0	0	6947	5752	1195	20.8%	17.2%	w/o Phing Purch: 6.5%
2002	S	6729	177	200	0	0	365	7471	6552	919	14.0%	12.3%	Brown 5, CCPH1 270 / 318 MW 06/01/02
2002/3	W	6882	177	200	0	0	0	7259	5881	1378	23.4%	19.0%	Reserve Margin w/o unit: 9.9% w/o Phing Purch: 8.5%
2003	S	6895	171	200	0	0	360	7626	6689	937	14.0%	12.3%	CCPH2 150 / 180 MW 06/01/03
2003/4	W	7078	171	200	0	0	0	7449	6026	1423	23.6%	19.1%	Reserve Margin w/o unit: 11.8% w/o Phing Purch: 8.6%
2004	S	7195	166	200	0	0	245	7806	6849	957	14.0%	12.3%	HRSG #1, CCPH1 300 / 331 MW 06/01/04
2004/5	W	7409	166	200	0	0	0	7775	6154	1621	26.3%	20.9%	Reserve Margin w/o unit: 9.6% w/o Phing Purch: 10.4%
2005	S	7495	160	200	0	0	120	7975	6995	980	14.0%	12.3%	CCPH2, HRSG #2 300 / 331 MW 06/01/05
2005/6	W	7740	160	200	0	0	0	8100	6274	1826	29.1%	22.5%	Reserve Margin w/o unit: 9.7% w/o Phing Purch: 12.3%
2006	S	7633	153	200	0	0	140	8126	7127	999	14.0%	12.3%	CCPH1 150 / 180 MW 06/01/06
2006/7	W	7908	153	200	0	0	0	8261	6386	1875	29.4%	22.7%	Reserve Margin w/o unit: 11.9% w/o Phing Purch: 12.1%
2007	S	7933	148	200	0	0	0	8281	7258	1023	14.1%	12.4%	CCPH2, HRSG #3 300 / 331 MW 06/01/07
2007/8	W	8239	148	200	0	0	0	8587	6517	2070	31.8%	24.1%	Reserve Margin w/o unit: 10.0% w/o Phing Purch: 14.1%
2008	S	8083	144	200	0	0	0	8427	7391	1036	14.0%	12.3%	CCPH1 150 / 180 MW 06/01/08
2008/9	W	8419	144	200	0	0	0	8763	6652	2111	31.7%	24.1%	Reserve Margin w/o unit: 12.0% w/o Phing Purch: 14.0%
2009	S	8233	140	200	0	0	15	8588	7534	1054	14.0%	12.3%	CCPH2 150 / 180 MW 06/01/09
2009/10	W	8599	140	200	0	0	0	8939	6793	2146	31.6%	24.0%	Reserve Margin w/o unit: 12.0% w/o Phing Purch: 13.8%
2010	S	8383	136	200	0	0	55	8774	7696	1078	14.0%	12.3%	HRSG #4 150 / 151 MW 06/01/10
2010/11	W	8750	136	200	0	0	0	9086	6905	2181	31.6%	24.0%	Reserve Margin w/o unit: 12.1% w/o Phing Purch: 13.3%
2011	S	8683	132	200	0	0	0	9015	7852	1163	14.8%	12.9%	CCPH1, CCPH2 300 / 360 MW 06/01/11
2011/12	W	9110	132	200	0	0	0	9442	7021	2421	34.5%	25.6%	Reserve Margin w/o unit: 11.0% w/o Phing Purch: 14.8%
2012	S	8833	127	200	0	0	0	9160	7970	1190	14.9%	13.0%	HRSG #5 150 / 151 MW 06/01/12
													Reserve Margin w/o unit: 13.1% w/o Phing Purch: 14.9%
<b>Total Cap Installed</b>											<b>2698 / 3055</b>		

ITEM NO. PSC-1

PAGE 6 OF         

WITNESS Willhite

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-13**

Responding Witness: Ronald L. Willhite

Q-13. On page 11 of his testimony, Mr. Willhite states that the "price of combustion turbines is expected to continue to rise". With respect to this statement:

- a. Please provide all documentation to support this statement.
- b. Please provide a projection of future CT prices that are the basis of this statement.

A-13.

- a. The expectation that CT prices will continue to rise is based on the observation that the summer 1998 purchase power price spikes has caused utilities to construct generation, particularly CTs, rather than rely totally on purchase power to satisfy near term capacity requirements. Therefore, the prices for CTs during this period are expected to rise as increased demand should create a corresponding increase in the price of new generating units.
- b. The basis of the statement is general in nature. The statement is not based on a specific projection of future CT prices; LG&E and KU do not possess such a projection at this time.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-14**

Responding Witness: H. Bruce Sauer

Q-14. Please provide the energy and load forecast summarized in Exhibit HBS-1 and 2.

A-14. Exhibit HBS-1 and 2 are the energy and load forecast of Louisville Gas and Electric and Kentucky Utilities for 1999-2013. Please refer to Exhibit HBS-3 for the energy and demand forecasting methodologies detail.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-15**

Responding Witness: H. Bruce Sauer

Q-15. Please provide the combined LG&E/KU annual sales and summer peak load for each of the last 15 years.

A-15.

Year	Total Sales to Ultimate Consumers and Requirements Sales For Resale (MWH)	Combined Demands (MW)
1984	18,843,688	3,825
1985	18,993,007	4,089
1986	19,989,581	4,319
1987	21,570,863	4,288
1988	22,990,701	4,908
1989	22,186,697	4,660
1990	22,374,318	4,984
1991	23,525,324	5,019
1992	23,207,886	4,952
1993	24,797,364	5,415
1994	25,349,705	5,346
1995	26,602,962	5,698
1996	27,137,584	5,475
1997	27,372,013	5,924
1998	28,582,999	5,986

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-16**

Responding Witness: James Kasey

- Q-16. On page 9 of his testimony, Mr. Kasey provides January and February forward prices for the summer of 1999. Please provide the present forward prices for future months for power as far into the future as prices are available. For these prices please provide details of the type of power (ex. on-peak 5x16).
- A-16. As of April 8, 1999, the following are the prices in \$/MWh for 50 MW of On-Peak (5x16 excluding holidays) firm power with liquidated damages delivered into Cinergy with Seller's choice of interface. (Where two or more months are listed together, the months trade as a package for the same price per MWh.) These prices are subject to change on a daily basis.

Term	Bid (\$/MWh)	Offer (\$/MWh)
May 1999	26.00	26.30
Jun 1999	51.00	52.50
Jul & Aug 1999	104.00	110.00
Sep 1999	32.50	33.50
Q4 1999	24.00	24.40
Jan & Feb 2000	28.25	29.00
Mar 2000	23.25	24.50
Apr 2000	21.75	23.00
May 2000	25.50	26.25
Jun 2000	44.00	48.00
Jul & Aug 2000	80.00	86.00
Jul & Aug 2001	70.00	77.00

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-17**

Responding Witness: Lonnie E. Bellar

Q-17. With respect to Exhibit LEB-2, the Resource Assessment, please provide the following:

- a. All scenarios examined investigated the purchase of 2 CTs, with only the timing of the additions varied. Please explain in detail why the addition of simple-cycle CTs was the only option examined.
- b. Please provide all studies that suggest that the joint company needs to add peaking units instead of intermediate capacity.
- c. If scenarios that included delayed CT installation were examined, why weren't other options with short lead times examined, such as Direct Load Control, Hydro, Compressed Air Energy Storage, and Inlet Air Cooling for existing combustion turbines.

A-17.

- a. and b. As noted on page 7 of the Resource Assessment in Exhibit LEB-2, the most recent IRPs of both companies recommended the installation of simple-cycle combustion turbine units (or the purchase of peaking options from the market) as the initial step of a long-range expansion plan. Recent production runs show that simple-cycle CTs are still the least-cost reliable generation asset acquisition. No formal documentation of these runs exists; however, the expansion plan ("KU and LG&E Joint Company Loads, Capabilities, and Reserves") which results from an optimization run is attached. This summary shows that simple-cycle CTs are a lower cost generation asset acquisition than combined-cycle CTs until 2010. Also, the 1999 IRP to be filed in October will provide formal documentation of the alternatives considered for meeting the future capacity needs of KU and LG&E.
- c. The Resource Assessment states on page 2 that a capacity need of approximately 470 MW exists in order to maintain the target reserve margin for the 1999 peak period. The Companies previously satisfied this need from purchase power and peaking options contracts. The CTs provide 328 MW of capacity. None of the other options listed can provide sufficient and reliable capacity to mitigate the reserve margin needs in time for 1999. However, the options mentioned are being considered as part of the 1999 IRP to be filed in October 1999. For example, discussions are ongoing with a potential hydro supplier and a supplier of inlet air cooling devices. Also, an internal

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-17 (continued)**

Responding Witness: Lonnie E. Bellar

evaluation is ongoing with respect to enhancements and refurbishment of the existing Ohio Falls hydro facility.

# KU and LG&E Joint Company Loads, Capabilities, and Reserves

20-Jan-99  
Joint Company at 14% Reserve Margin and -0.33% Load Diversity

Year	Season	Generating Capacity (MW)	Purchases (MW)					Net Capability (MW)	Net Forecast Peak Load (MW)	Reserves (MW)	Reserves (%)	Capacity Margin (%)	Unit Addition (Total Company)			
			OMU	EI	CIN	Call	Peaking						Unit Number	Summer MW	Winter MW	
1998	S	6131	207	200	110	50	75	6773	5943	830	14.0%	12.3%				
1998/99	W	6202	207	200	110	0	0	6719	5392	1327	24.6%	19.7%	Reserve Margin w/o unit:	14.0%		MW w/o Peaking Purch: 12.7%
1999	S	6459	199	200	0	0	130	6988	6128	860	14.0%	12.3%	Brown 7 & 6	328 /	370 MW	08/01/99
1999/0	W	6572	199	200	0	0	0	6971	5514	1457	26.4%	20.9%	Reserve Margin w/o unit:	8.7%		w/o Peaking Purch: 11.9%
2000	S	6459	192	200	0	0	340	7191	6308	883	14.0%	12.3%				MW 06/01/00
2000/1	W	6572	192	200	0	0	0	6964	5625	1339	23.8%	19.2%	Reserve Margin w/o unit:	14.0%		w/o Peaking Purch: 8.6%
2001	S	6459	186	200	0	0	475	7320	6423	897	14.0%	12.3%				MW 06/01/01
2001/2	W	6572	186	200	0	0	0	6958	5746	1212	21.1%	17.4%	Reserve Margin w/o unit:	14.0%		w/o Peaking Purch: 6.6%
2002	S	6579	185	200	0	0	500	7464	6547	917	14.0%	12.3%	Brown 5	120 /	140 MW	06/01/02
2002/3	W	6712	185	200	0	0	0	7097	5876	1221	20.8%	17.2%	Reserve Margin w/o unit:	12.2%		w/o Peaking Purch: 6.4%
2003	S	6745	183	200	0	0	490	7618	6684	934	14.0%	12.3%	CT01	150 /	185 MW	06/01/03
2003/4	W	6913	183	200	0	0	0	7296	6020	1276	21.2%	17.5%	Reserve Margin w/o unit:	11.7%		w/o Peaking Purch: 6.6%
2004	S	6895	182	200	0	0	525	7802	6845	957	14.0%	12.3%	CT02	150 /	185 MW	06/01/04
2004/5	W	7098	182	200	0	0	0	7480	6148	1332	21.7%	17.8%	Reserve Margin w/o unit:	11.8%		w/o Peaking Purch: 6.3%
2005	S	7045	180	200	0	0	545	7970	6991	979	14.0%	12.3%	CT03	150 /	185 MW	06/01/05
2005/6	W	7283	180	200	0	0	0	7663	6268	1395	22.3%	18.2%	Reserve Margin w/o unit:	11.9%		w/o Peaking Purch: 6.2%
2006	S	7183	178	200	0	0	560	8121	7123	998	14.0%	12.3%	CT04	150 /	185 MW	06/01/06
2006/7	W	7456	178	200	0	0	0	7834	6379	1455	22.8%	18.6%	Reserve Margin w/o unit:	11.9%		w/o Peaking Purch: 6.2%
2007	S	7333	177	200	0	0	560	8270	7253	1017	14.0%	12.3%	CT05	150 /	185 MW	06/01/07
2007/8	W	7641	177	200	0	0	0	8018	6511	1507	23.2%	18.8%	Reserve Margin w/o unit:	11.9%		w/o Peaking Purch: 6.3%
2008	S	7483	175	200	0	0	560	8418	7385	1033	14.0%	12.3%	CT06	150 /	185 MW	06/01/08
2008/9	W	7826	175	200	0	0	0	8201	6645	1556	23.4%	19.0%	Reserve Margin w/o unit:	12.0%		w/o Peaking Purch: 6.4%
2009	S	7783	171	200	0	0	430	8584	7528	1056	14.0%	12.3%	CT07 & CT08	300 /	370 MW	06/01/09
2009/10	W	8196	171	200	0	0	0	8567	6787	1780	26.2%	20.8%	Reserve Margin w/o unit:	10.0%		w/o Peaking Purch: 8.3%
2010	S	7933	168	200	0	0	465	8766	7690	1076	14.0%	12.3%	CCPH1	150 /	185 MW	06/01/10
2010/11	W	8381	168	200	0	0	0	8749	6898	1851	26.8%	21.2%	Reserve Margin w/o unit:	12.0%		w/o Peaking Purch: 7.9%
2011	S	8083	164	200	0	0	500	8947	7846	1101	14.0%	12.3%	CCPH2	150 /	185 MW	06/01/11
2011/12	W	8566	164	200	0	0	0	8930	7014	1916	27.3%	21.5%	Reserve Margin w/o unit:	12.1%		w/o Peaking Purch: 7.7%
2012	S	8233	160	200	0	0	485	9078	7964	1114	14.0%	12.3%	HRSG #1	150 /	141 MW	06/01/12
													Reserve Margin w/o unit:	12.1%		w/o Peaking Purch: 7.9%
<b>Total Cap Installed</b>													<b>2,098 /</b>	<b>2,501</b>		

Note: Although Brown CTs 7 & 6 are shown as being completed in 1999, they are installed after the Summer 1999 July peak. Therefore, the companies' 1999 Peaking purchase required to maintain 14% Reserve Margin is 130MW (peaking purchase) + 328 (Brown CTs 7 & 6) or ~460MW.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-18**

**Responding Witness: Lonnie E. Bellar**

Q-18. On page 6 of Exhibit LEB-2, the Resource Assessment, Table 1 lists the Expansion Plans for the two Applicants. Please provide a detailed explanation of why the LG&E 1993 IRP Expansion Plan summary in the Resource Assessment is incomplete and fails to list the Direct Load Control additions, the Hydro upgrade, and the Standby generation called for in the 1993 IRP. Why were these options, which were found to be economical in the IRP, ignored by the present Resource Assessment.

A-18. These options were not ignored. However, the Resource Assessment placed particular emphasis on alternatives for obtaining the required capacity resources for 1999 under current conditions that have evolved following the summer 1998 price spikes. Table 1 is a summary of the expansion alternatives from the LG&E 1993 IRP and the KU 1996 IRP that were both significant in volume and specific to the Resource Assessment.

For 1998 and beyond, Table 1 of the Resource Assessment does not include three resource types listed in the LG&E 1993 IRP:

Study Year	Resource
1999	37 MW Firm Short Term Purchase
2001	18.4 MW Air Conditioning Direct Load Control
2002	18.4 MW Air Conditioning Direct Load Control
2003	16 MW Hydro Upgrade 18.4 MW Air Conditioning Direct Load Control

1. 1999 37 MW Firm Short Term Purchase

The LG&E 1993 IRP assumed that for a small volume of required capacity, the least-cost alternative was to purchase from the market. The market conditions

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-18 (continued)**

Responding Witness: Lonnie E. Bellar

outlined in the Resource Assessment and in Mr. Kasey's testimony explain why this assumption is no longer applicable.

2. 18.4 MW of Air Conditioning Direct Load Control in 2001, 2002, and 2003:

Studies conducted in 1997 indicated that the Residential Load Management Program required further evaluation. The DSM Collaborative put the program on hold at that time. Thus the Direct Load Control resource acquisitions for 2001-2003 are not included in the Resource Assessment. As part of the joint IRP, the Applicants will evaluate alternatives under the joint planning conditions pursuant to FERC Rate Schedule No. 1.

3. 16 MW of Hydro Upgrade in 2003

The hydroelectric upgrade at Ohio Falls is included in the production cost model used in the analysis. This resource addition was inadvertently omitted from Table 1.

Customer-Owned Standby Generation was also included as a resource addition in the LG&E 1993 IRP. The IRP states on page 5-11 that LG&E "hopes to acquire the use of 6.5 megawatts of standby generation by 1997." This acquisition did not occur as a result of a 1995 study that determined the standby generation was not a least-cost resource acquisition.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-19**

Responding Witness: Lonnie E. Bellar

Q-19. Based on the current Resource Assessment and the proposal to add to CTs, please provide an update of each Applicant's avoided costs to be used in DSM cost benefit tests.

A-19. The current avoided capacity cost based on the cost of CTs requested in the Application is \$47.12/kw/yr. This cost is dependent upon a number of factors and is subject to change as conditions warrant. The avoided costs presented here resulted from the Resource Assessment and thus have no bearing on the evaluation of the acquisition of the CTs.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-20**

Responding Witness: Ronald L. Willhite

Q-20. Has LG&E informed its DSM collaborative that capacity costs have increased substantially and that DSM programs that previously were not cost effective may now be cost effective?

A-20. In November 1998, the DSM Collaborative was informed of the changes in the avoided costs during the process of preparing the most recent DSM filing. LG&E and KU are evaluating DSM measures and programs for the subsequent IRP filing in October 1999. The 1999 LG&E and KU IRP filing will present the evaluation of LG&E and KU on whether DSM programs are currently cost-effective.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-21**

**Responding Witness: Lonnie Bellar**

Q-21. Attachment 2 on page 19 of the Resource Assessment shows the Planned Reserve Margins for ECAR. With respect to this chart:

- a. When did the Applicants become aware of this situation developing in the ECAR region?
- b. If you had knowledge that the capacity surplus in this region was being used up, and that prices for power would increase correspondingly, why didn't the Applicants begin this project to add two CTs before the crisis of 1998, when CT prices increased substantially?

A-21.

- a. The reserve margin situation in ECAR has been presented for the last several years in ECAR's "Assessment of ECAR-Wide Capacity Margins GRP-57" reports. Since 1994, the annual GRP-57 reports have shown declining ECAR capacity margins for future years. The data in Attachment 2 of the Resource Assessment is provided in the "98-GRP-57: Load and Capability Data" book, which was dated June 1998 and was received in July 1998. However, as discussed in response to AG 21(b), these ECAR reports do not predict future trends in market power prices.
- b. The ECAR 98-GRP-57 Report does not predict future trends in market power prices; it is an assessment of expected ECAR-wide capacity margins. Many factors contributed to the sharp increase in power prices, including generation outages, transmission difficulties, high temperatures, and other conditions described in Mr. Kasey's testimony on page 5. LG&E and KU did not begin the CT acquisition project before the 1998 price spike because the CT acquisition was not the least-cost method of acquiring capacity before the prices increased so dramatically in 1998. LG&E and KU continually evaluate the "buy vs. build" decision on the basis of least cost. The magnitude of the change in market conditions in 1998 prompted the evaluation of accelerating CT installation. Mr. Bellar explains this on page 2 of his testimony.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-22**

Responding Witness: Lonnie Bellar

Q-22. With respect to the Resource Assessment, Appendix A, Tables 1 and 2 on pages 5 and 6 of 10:

- a. Please explain exactly what these prices are (example: projected actual average prices of power delivered to Cinergy).
- b. Please provide the source of these figures, including all calculations, formulas, assumptions and workpapers used to generate these figures.
- c. Please explain in detail exactly where and how the resource planning model uses these tables.

A-22.

- a. Table 1 lists the On-Peak (5x16) Market Prices used in the production cost model. Specifically, the prices listed for each month from 1999-2027 are the projected prices in \$/MWh for Firm power for 5x16 (Monday through Friday, hours ending 8-23 Eastern Prevailing Time, excluding holidays) with liquidated damages, delivered into Cinergy. Table 2 lists the Off-Peak Market Prices used in the production cost model; that is, the prices for all hours that are not On-Peak. Specifically, the prices listed for each month from 1999-2027 are the projected prices in \$/MWh for Firm power for 5x8, 2x24 (Monday through Friday, hours ending 1-7 and 24 Eastern Prevailing Time, and all day Saturday, Sunday, and holidays) with liquidated damages, delivered into Cinergy.
- b. The prices listed for 1999-2003 were determined by the LG&E Energy Marketing group. The group closely follows the forward prices for energy delivered into Cinergy and surrounding regions. The group interacts with energy brokers, marketing entities and neighboring utilities on a consistent basis and participates actively in the forward markets. This group constantly monitors forward market prices and does not rely on any straightforward calculations, formulas, assumptions or workpapers to generate these figures. Prices for years after 2003 (for which market price information is scarce) are based on the 2003 prices escalated at 4% annually.
- c. The production cost model uses these prices in modeling Spot Market Purchases. No Firm or Non-Firm sales are modeled. Spot Market Purchases are based on the expected cost of emergency energy from the market for the

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-22 (continued)**

Responding Witness: Lonnie Bellar

hours for which energy needs exist as determined by the simulation. This assumes that purchases of this type will be from peaking units at "peaking" market price. The peaking market prices are calculated as 4 times the given On-Peak (5x16) values listed in Table 1 for any month. Off-Peak market hourly prices are calculated as 2 times the given Off-Peak (5x8, 2x24) value in Table 1 for any month. The factors of 4 and 2 are used to translate the (5x16) and the (5x8, 2x24) forward market prices, respectively, into hourly purchase prices during hours of peak need. This is explained in the Resource Assessment in Appendix A on Page 2 of 10.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-23**

Responding Witness: Lonnie Bellar

Q-23. With respect to the Resource Assessment, Appendix A, Tables 3 on pages 8 of 10, why was the Falls of the Ohio plant excluded. Was the Falls of the Ohio plant excluded from the planning model? If so, why was it excluded?

A-23. Ohio Falls was included in the production cost model but was inadvertently omitted from Table 3 in Appendix A of the Resource Assessment.

The data for Ohio Falls that should appear in Table 3 is listed below.

Winter Capability:	34 MW
Summer Derate:	0 MW
Summer Capability:	47 MW
Minimum Block:	34 MW
1998 FOR:	0 %
1998 EFOR:	0 %
1998 PFOR:	0 %

The Winter and Summer Capability values are based on expected outages and river flow; the actual maximum capability at the Ohio Falls physical plant is 80 MW.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-24**

Responding Witness: Lonnie Bellar

- Q-24. In the application on page 6, it is stated that the fuel costs for the new CTs are expected to rise on average at an annual rate of 4.9% for gas and 5.6% for oil. Does the resource model project the increase in fuel cost to be the same in each future year? If not, please provide the estimated annual increase in price for each year of the planning period?
- A-24. The fuel costs for gas and oil as modeled in the Resource Assessment is confidential and proprietary and not available for public disclosure. The information considered confidential has been redacted on the attached sheet and is being filed with the Commission pursuant to a Petition for Confidential Protection. The response to this question will be made available to the AG pursuant to the execution of a Confidentiality Agreement.

**CONFIDENTIAL AND PROPRIETARY**

**Gas and Oil Prices as modelled in Resource Assessment**

	Gas (Cents/Mbtu)	Annual Gas Escalation	Oil (Cents/Mbtu)	Annual Oil Escalation
1999				
2000				
2001				
2002				
2003				
2004				
2005				
2006				
2007				
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
2027				

**CONFIDENTIAL INFORMATION REDACTED**

Average Annual Escalation Rate                      4.9%    5.6%

Source for Gas & Oil price forecasting; Standard & Poor's DRI, a division of McGraw Hill.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

**Question: AG-25**

Responding Witness: Caryl M. Pfeiffer

Q-25. Exhibit 2 to the application includes various permits in the name of KU which support the Companies position that they have the necessary permits for the installation of the two CTs . Those permits are held solely in the name of KU.

- a. Please explain the process by which LG&E Capital Corp. is entitled to the use of permits granted to KU for the building and operation of its CTs. Are these permits transferable in part? If so, on what basis, and by what means?
- b. What has LG&E Capital Corp. paid to KU for the benefit of the permits? Please supply all supporting paperwork.

A-25.

- a. The Kentucky Division for Air Quality (KYDAQ) has recognized that ownership of the CTs by LG&E Capital Corp. is subject to the pending Application and has not requested an amendment to the permit at this time. If the KYDAQ subsequently requests such an amendment to the permit, KU will file such an administrative permit amendment.
- b. At the time the combustion turbines were available on the market, the demand for this type of equipment exceeded the supply for the next several years. LG&E Capital Corp.'s purchase and construction of the combustion turbines was done to allow LG&E and KU the opportunity to apply for the CCN and CEC while protecting LG&E or KU and their customers from any adverse impact from the risks undertaken by LG&E Capital Corp.

The application of LG&E and KU demonstrates that the acquisition of the two combustion turbines is the most reasonable and economical way for the companies to meet their reserve margin. LG&E and KU and their customers will benefit from the acquisition of the combustion turbines. LG&E Capital Corp will not benefit from the permits at this time because LG&E Capital Corp. is not holding and constructing the combustion turbines for the purpose of owning them in the future but for the benefit of LG&E and KU and their customers. If the Commission denies the application of LG&E and KU for a CCN and a CEC, then it would be appropriate for LG&E Capital Corp to pay KU for the benefit, if any, from the permits.

# OGDEN NEWELL & WELCH

RICHARD F. NEWELL  
JOHN T. BALLANTINE  
JOSEPH C. OLDHAM  
JAMES L. COORSSEN\*  
STEPHEN F. SCHUSTER  
JOHN G. TREITZ, JR.  
WALTER LAPP SALES  
ERNEST W. WILLIAMS  
SCOTT W. BRINKMAN  
W. GREGORY KING  
KENDRICK R. RIGGS†  
JAMES B. MARTIN, JR.

LISA ANN VOOT  
TURNER P. BERRY  
JOHN WADE HENDRICKS  
LYNN H. WANGERIN  
DOUGLAS C. BALLANTINE  
THOMAS E. RUTLEDGE††  
THOMAS M. WILLIAMS\*\*  
SHARON A. MATTINGLY  
LAUREN ANDERSON  
GENE LYNN HUMPHREYS  
ANTHONY L. SCHNELL  
ALLYSON K. STURGEON

1700 CITIZENS PLAZA  
500 WEST JEFFERSON STREET  
LOUISVILLE, KENTUCKY 40202-2874  
(502) 582-1601  
FAX: (502) 581-9564

MOLLY HYLAND WOLFRAM  
TIMOTHY J. EIFLER  
KELLY S. HENRY  
J. GREGORY CORNETT  
MELONY J. LANE  
ROBERT W. ADAMS III\*\*  
MAUREEN M. CARR††□  
E. PATRICK MULVIHILL  
JOSEPH A. KIRWAN  
CHRISTY A. AMES

OF COUNSEL  
JAMES S. WELCH  
JOHN S. GREENEBAUM PSC  
GREGORY J. BUBALO\*\*  
ROBERT E. THIEMAN  
ENOCH M. POON

SQUIRE R. OGDEN  
1899-1984

ALSO ADMITTED:  
\*FLORIDA  
\*\*INDIANA  
†VIRGINIA  
††DISTRICT OF COLUMBIA  
□OHIO

April 13, 1999

Helen C. Helton  
Executive Director  
Public Service Commission  
730 Schenkel Lane  
P.O. Box 615  
Frankfort, KY 40602-0615

RECEIVED  
APR 13 1999  
PUBLIC SERVICE  
COMMISSION

**RE: In the Matter of: APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE ACQUISITION OF TWO 164 MEGAWATT COMBUSTION TURBINES**  
**Case No. 99-056**

Dear Ms. Helton:

Please find enclosed and accept for filing the original and six copies of LG&E's and KU's Responses to Requests for Information propounded by the Attorney General. Also enclosed is a Petition for Confidential Protection of certain information provided in response to Attorney General's Request No. 24. A copy of this information is provided under seal marked Confidential and Proprietary. Please place the confidential documents in a secure file and protect their contents from public disclosure pending a ruling on the Petition for Confidential Protection.

Sincerely,



Lauren Anderson  
Attorney

cc: Parties of Record

**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**APPLICATION OF LOUISVILLE GAS AND ELECTRIC )  
COMPANY AND KENTUCKY UTILITIES COMPANY )  
FOR A CERTIFICATE OF PUBLIC CONVENIENCE ) CASE NO. 99-056  
AND NECESSITY FOR THE RESOURCE ACQUISITION )  
OF TWO 164 MEGAWATT COMBUSTION TURBINES )**

**PETITION OF LOUISVILLE GAS AND ELECTRIC COMPANY  
AND KENTUCKY UTILITIES COMPANY  
FOR CONFIDENTIAL PROTECTION**

**RECEIVED  
APR 13 1999  
PUBLIC SERVICE  
COMMISSION**

Pursuant to 807 KAR 5:001 Section 7, Louisville Gas and Electric Company (LG&E) and Kentucky Utilities Company (KU) (collectively the Companies) petition the Public Service Commission (the Commission) to grant confidential protection to certain information contained in the Responses to Requests for Information Propounded by the Attorney General. In support of this Petition, the Companies state as follows:

1. Attorney General Request no. 24 requests estimated annual increases in fuel costs. Disclosure of this information would provide fuel suppliers with the Companies' expectations about the future price of fuel. This would allow oil and gas suppliers to take advantage of the Companies' solicitations by increasing their bids to the maximum extent possible, thereby causing higher fuel prices for the Companies' customers.

2. By letter dated March 4, 1999, the Commission granted confidential protection to related information concerning fuel costs and production costs, which was found in Appendix E to the Companies' Resource Assessment. The Resource Assessment was filed (with the

confidential portions redacted) with the above-referenced Application as Exhibit LEB-2 to the testimony of Lonnie E. Bellar.

3. Pursuant to KRS 61.878(1)(c), records confidentially disclosed to an agency which are generally recognized as confidential or proprietary in nature are exempt from public inspection. The information described above constitutes confidential proprietary information, the disclosure of which would provide unfair commercial advantages to the Companies' competitors in the wholesale power market.

4. The Companies do not object to disclosure of the confidential information, pursuant to a protective agreement, to the Attorney General or other intervenors with a legitimate interest in reviewing the confidential information for the purpose of intervening in this case.

5. In accordance with 807 KAR 5:001 Section 7, one copy of the Companies' Responses with the confidential information highlighted and ten copies of the Responses with the confidential information obscured is being filed with the Commission.

**WHEREFORE**, Louisville Gas and Electric Company and Kentucky Utilities Company respectfully request that the Commission grant confidential protection to the information designated as confidential for a period of five years from the date of the filing of this application, or in the alternative, schedule an evidentiary hearing on all factual issues.

Respectfully submitted,



---

Kendrick R. Riggs  
Lauren Anderson  
OGDEN NEWELL & WELCH  
1700 Citizens Plaza  
500 West Jefferson Street  
Louisville, Kentucky 40202  
502/582-1601

John R. McCall  
Executive Vice President  
General Counsel  
Corporate Secretary  
Douglas M. Brooks  
Senior Counsel Specialist,  
Regulatory

Ronald L. Willhite  
Vice President, Regulatory Affairs  
Louisville Gas & Electric Company  
220 West Main Street  
P.O. Box 32010  
Louisville, KY 40232

**CERTIFICATE OF SERVICE**

I hereby certify that a true copy of the foregoing was served via U.S. mail, first-class, postage prepaid, this 13<sup>th</sup> day of April, 1999.

Elizabeth E. Blackford  
Assistant Attorney General  
Public Service Litigation  
P. O. Box 2000  
Frankfort, KY 40602-2000

Michael L. Kurtz, Esq.  
Boehm, Kurtz & Lowry  
2110 CBLD Center  
36 East Seventh Street  
Cincinnati, OH 45202



---

Counsel for Louisville Gas  
and Electric Company and  
Kentucky Utilities Company

REC

APR 11 1999

PUBLIC  
COMMISSION

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND )  
ELECTRIC COMPANY AND KENTUCKY )  
UTILITIES COMPANY FOR A CERTIFICATE )  
OF CONVENIENCE AND NECESSITY FOR )  
THE ACQUISITION OF TWO 164 MEGAWATT )  
COMBUSTION TURBINES )

CASE NO. 99-056

RESPONSE TO  
COMMISSION'S ORDER DATED  
APRIL 9, 1999

FILED: APRIL 19, 1999

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S1**

Responding Witness: Ronald L. Willhite  
Michael D. Robinson

Q-1. Refer to the response to the Commission's March 16 and 19, 1999 Orders, Item 4.

- a. Is it correct that there are no memorandum of understanding or other written documents concerning the construction by LG&E Capital Corp. of two combustion turbines ("CTs") on property owned by KU? If no, provide copies of the documentation.
- b. Is KU following good business practices by allowing LG&E Capital Corp. to construct an asset on KU's property without some governing document or agreement? Explain the response.
- c. Since the construction site for the CTs has not been transferred, deeded, or leased to LG&E Capital Corp., explain in detail how this arrangement does not constitute a subsidization of LG&E Capital Corp. operations by KU.

- A-1. a. No. Although there is no memorandum of understanding or other written document such as a lease or deed concerning LG&E Capital Corp.'s construction of the two combustion turbines (CTs) at the E.W. Brown Generating Station, there are numerous accounting entries on the books and records of KU, LG&E Energy Corp. and LG&E Capital Corp. that document the cost of the construction and allocate the cost according to the Corporate Policies and Guidelines for InterCompany Transactions (the Guidelines).

The Guidelines do not require a particular document such as a deed or lease when an unregulated affiliate such as LG&E Capital Corp. is holding and constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for the CCN and CEC and comply with KRS 278.020.

If the Commission does not grant the requested Certificate of Public Convenience and Necessity (CCN) to LG&E and KU, then it is appropriate for KU and LG&E Capital Corp. to enter into a lease and service agreement for the portion of KU's property on which the CTs are located. The lease agreement will be in compliance with the Guidelines and filed with the Commission.

- b. Yes. KU is not allowing LG&E Capital Corp. to construct an asset on KU's property without a governing document. KU is following good business

ITEM NO. PSC-S1

PAGE 1 OF 2

WITNESS Willhite/Robinson

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

practices by following the principles, including the accounting procedures, specified in the Guidelines. This is particularly true since LG&E Capital Corp. owns and is constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for the CCN and CEC. The limited amount of the generation engineering services that is currently being performed by KU on the site for LG&E Energy Corp. on behalf of LG&E Capital will be billed to LG&E Energy Corp. and then billed to LG&E Capital Corp. All charges are fully documented and accounted for in accordance with the Guidelines.

- c. LG&E Capital Corp is not being subsidized by KU at this time because LG&E Capital Corp. owns and is constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for the CCN and CEC. If the Commission denies the application of LG&E and KU for a CCN and a CEC, then it would be appropriate for LG&E Capital Corp to pay KU for the benefit of the site under a lease agreement.

ITEM NO. PSC-51  
PAGE 2 OF 2  
WITNESS Willhite/Robinson

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S2**

Responding Witness: Caryl M. Pfeiffer  
Michael D. Robinson

Q-2. Refer to the response to the Commission's March 16 and 19, 1999 Orders,  
Item 15.

- a. KU and LG&E were requested to provide the expected levels of emissions and the expected levels of effluent discharges for the two 164 megawatt CTs, for the units alone and for the entire site at the Brown station upon the new CTs becoming operational. The response did not quantify the expected levels of emissions or effluent discharges. The request was seeking a quantification of these levels. With this clarification, provide the information originally requested.
- b. When did KU begin its discussions with the Kentucky Division of Water concerning its Kentucky Pollutant Discharge Elimination System ("KPDES") permit? Did these discussions begin prior to the start of the CT construction?
- c. Provide copies of the application and all supporting documentation submitted to the Kentucky Division of Water concerning the modification of the existing KPDES permit. Any documents filed in conjunction with this modification after the response date to this Order, as well as the Kentucky Division of Water's ruling on the request to modify, should be filed in the record of this proceeding as a supplemental response to this data request item.
- d. Is KU bearing the full cost of seeking this permit modification? Depending on the Commission's decision, will either LG&E or LG&E Capital Corp. reimburse KU for this expense?

A-2. a. See attached tables.

- b. KU began discussions with the Kentucky Division of Water (KYDOW) in early 1999.
- c. Attached is a copy of the documentation submitted to the KYDOW in support of KU's request for a modification to discharge 001 of the KPDES permit for the E.W. Brown Generating Station.
- d. The expenses incurred by KU in seeking the KPDES permit modification have been charged to the appropriate work orders established for the project.

ITEM NO. PSC-S2

PAGE 1 OF 2

WITNESS Pfeiffer/Robinson

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

Upon completion of this proceeding all costs will be assigned to the ultimate owner. If KU is the owner as requested by this application, all costs will remain on the official books of KU, and the LG&E share will be allocated, billed and collected pursuant to the Power Systems Supply Agreement (PSSA) FERC rate schedule No. 1.

ITEM NO. PSC-52

PAGE 2 OF 2

WITNESS Pfeiffer/Robinson

LOUISVILLE GAS AND ELECTRIC COMPANY  
 KENTUCKY UTILITIES COMPANY  
 CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S2**

Responding Witness: Caryl M. Pfeiffer

A-2 a.

Page 1 of 2

Expected Levels of Air Emissions:

	Permit Limit Emissions For one CT At Permit Limit	Emissions at Full Load for Four GT 11N2's	Emissions at Full Load for Two GT24s	Emissions at Full Load for Six Turbines	Permit Limit Emissions For Six CTs At Permit Limit
Natural Gas Hourly:					
NOx ppm	42	<b>42</b>	<b>42</b>	42	42
CO lb/hr	75	<b>300</b>	<b>85</b>	385	450
VOC lb/hr	20.4	<b>82</b>	<b>5</b>	87	122
TSP/PM10 lb/hr	67	<b>268</b>	<b>35</b>	303	402
Natural Gas Annual (at 2500 hr/yr):					
CO ton/yr	93.8	<b>375</b>	<b>106</b>	481	563
VOC ton/yr	25.5	<b>102</b>	<b>6</b>	108	153
TSP/PM10 ton/yr	83.8	<b>335</b>	<b>44</b>	379	503
Oil Hourly:					
NOx ppm	65	<b>65</b>	<b>65</b>	65	65
CO lb/hr	75	<b>300</b>	<b>104</b>	404	450
VOC lb/hr	20.4	<b>82</b>	<b>12</b>	94	122
TSP/PM10 lb/hr	67	<b>268</b>	<b>104</b>	372	402
SO2 lb/hr	444	<b>1,776</b>	<b>868</b>	2,644	2,664
Oil Annual (at 2500 hr/yr):					
CO ton/yr	93.85	<b>375</b>	<b>130</b>	505	563
VOC ton/yr	25.5	<b>102</b>	<b>15</b>	117	153
TSP/PM10 ton/yr	83.8	<b>335</b>	<b>130</b>	465	503
SO2 ton/yr	555	<b>2,220</b>	<b>1,091</b>	3,311	3,330

Note: NOx ppm for GT24 is currently under review by the Kentucky Division for Air Quality.

LOUISVILLE GAS AND ELECTRIC COMPANY  
 KENTUCKY UTILITIES COMPANY  
 CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S2**

Responding Witness: Caryl M. Pfeiffer

A-2 a.

Page 2 of 2

Expected levels of effluent discharges (based on peak monthly average conditions):

	4 existing CTs	2 new CTs	6 CTs
NOx control water (demineralized water)	158,400 gal/day	72,000 gal/day	230,400 gal/day
CT compressor cleaning wash water (maintenance flow only)	200 gal/wash & rinse	-----	200 gal/day
New Demineralizer Water Pretreatment Backwash & Rinse Wastewater Flows	0 gal/day	10,100 gal/day	10,100 gal/day
New Demineralizer Regenerant Wastewater Flows	0 gal/day	51,100 gal/day	51,100 gal/day
CT plant oily water drains (maintenance flow only)	8,000 gal/day	-----	8,000 gal/day
CT stormwater runoff flows to oil/water separator	5,400 gal/day	500 gal/day	5,900 gal/day

Note: Peak monthly average conditions equals 28 days of average operation flows, 1 day of maximum operation flows, and 1 day of maintenance operation flows.

Kentucky Utilities Company One Quality Street Lexington, KY 40507-1462 Tel 606 255-2100

# Utilities



April 8, 1999

Mr. R. Bruce Scott, P.E.  
KPDES Branch  
KYNREPC, Division of Water  
Frankfort Office Park  
14 Reilly Road  
Frankfort, KY 40601

Re: E. W. Brown Generating Station  
NPDES No. KY0002020  
Mercer County, Kentucky Utilities Company

Dear Mr. Scott:

Enclosed please find documentation submitted in support of our request for a modification to discharge 001 of the KPDES permit held by Kentucky Utilities Company for its E. W. Brown Generating Station. Per our conversation, this modification is necessary: 1) to add the process flows which will be associated with the operation of the simple cycle combustion turbines being installed at the site; and, 2) to alter the stormwater runoff flows associated with the further development of the combustion turbine site (equipment and concrete installation upon previously graveled areas); and, 3) to correct the water balance diagrams for the recent change of station potable water source to the Lake Village public water supply.

We have enclosed:

1. an updated description of existing pollution abatement facilities at the site (changes only to 001-ash treatment basin discharge and non-point source stormwater runoff),
2. stormwater/rainfall runoff calculations (changes only to Areas 9 and 11),
3. a revised stormwater runoff diagram,
4. revised water balance diagrams (30-day peak monthly, average rainfall conditions and 30-day peak monthly, 1-day maximum rainfall conditions),

5. a summary of the combustion turbine process flows added to the water balance diagrams, and
6. Material Safety Data Sheets for the detergents which will be used in the periodic water washing of the turbines.

If you have any questions regarding this information, please feel free to contact me at 502-627-2997.

Sincerely,



Roger J. Medina  
Sr. Chemical Engineer  
Environmental Affairs

RJM  
Enclosures

E. W. BROWN GENERATING STATION

Description of Existing Pollution Abatement Facilities  
(Changes Shown in Bold Type)

Apr-99

Discharge Description	FLOW	
	1-Day GPD	30-Day GPD
001 Ash Treatment Basin Discharge:		
1. Units 1 & 2 Bottom & Fly Ash Sluice	2,209,900	2,209,900
2. Comb.Turb. Facility Oil/Water Separators Lift Stations	8,000	8,000
CT Aux Transformers Diked Pads Precipitation (A11a)	35,700	1,000
CT Fuel Oil Tanks Bermed Area Precipitation(A11b)	113,200	3,200
CT Fuel Oil Truck Unloading Area Precipitation (A11c)	40,700	1,200
<b>CT Aux Transformers Diked Pads Precipitation (A11d)</b>	<b>17,900</b>	<b>500</b>
3. <b>Units 1 &amp; 2 Oil/Water Separator Lift Station</b>	<b>109,900</b>	<b>109,900</b>
Precipitator & Chimney Area Precipitation (A1)	211,500	6,000
4. Unit 3 Oil/Water Separator Lift Station	795,600	795,600
Warehouse Blacktop Drains Precipitation (A2)	195,400	5,500
Dry Flyash Unloading Area Precipitation (A10)	6,700	200
5. Unit 3 Fly Ash Sluice	1,534,200	1,534,200
6. Unit 3 Bottom & Economizer Ash Sluice	1,370,300	1,370,300
7. Coal Pile Retention Basin		
Crusher House Dust Collector	27,800	27,800
Units 1-2 Cooling Tower Blowdown	213,000	213,000
<b>CT Comp. Cleaning Washwater</b>	<b>200</b>	<b>200</b>
Coal Storage Area Precipitation (A3)	660,300	18,700
8. Direct Precipitation to Pond (A5)	14,636,700	414,900
<b>Total</b>	<b>22,187,000</b>	<b>6,720,100</b>
002 Units 1 & 2 Cooling Tower Blowdown		
1. Units 1 & 2 CT Blowdown	3,662,300	3,662,300
2. Units 1 & 2 Roof Drains (A4a)	98,300	2,800
3. Cooling Tower Direct Precipitation (A4b)	53,700	1,500
<b>Total</b>	<b>3,814,300</b>	<b>3,666,600</b>
003 Unit 3 Cooling Tower Blowdown		
1. Unit 3 Cooling Tower Blowdown	998,800	998,800
2. Unit 3 Roof Drains (A7a)	144,900	4,100
3. Cooling Tower Direct Precipitation (A7b)	67,700	1,900
4. <b>Unit 3 Misc. Heat Exchangers</b>	<b>825,600</b>	<b>825,600</b>
<b>Total</b>	<b>2,037,000</b>	<b>1,830,400</b>
Non-Point Source Stormwater Runoff to Herrington Lake or Dix River:		
1. Area 6: 231.61 acres	8,518,100	241,500
2. Area 8: 103.05 acres	4,099,000	116,200
3. <b>Area 9: 137.4 acres</b>	<b>3,768,355</b>	<b>106,833</b>
<b>Total from 472.24 acres</b>	<b>16,385,455</b>	<b>464,533</b>

ENCLOSURE 2

E. W. BROWN GENERATING STATION

Stormwater/Rainfall Runoff Calculations

April-99

Data

Area	#acres	
Coefficient for Rainfall Runoff	Cr	
10-Year 24 Hour Rainfall	4.3	inch/24 hours
Annual Average Rainfall	44.49	inch/year

Runoff Equations

1-Day Flow:  
 $(\#Acres)(43560 \text{ ft}^2)/(\text{Acre})(Cr)(4.3 \text{ in/day})(1 \text{ ft}/12 \text{ in})$   
 $(7.48 \text{ gal}/\text{ft}^3)(1 \text{ MG}/1000000 \text{ Gal})$   
 $= 0.116755(\#Acres)(Cr) \text{ MGD}$

30-Day Flow:  
 $(\#Acres)(43560 \text{ ft}^2)/(\text{Acre})(Cr)(44.49 \text{ in}/\text{yr})(1 \text{ ft}/12 \text{ in})$   
 $(7.48 \text{ gal}/\text{ft}^3)(1 \text{ year}/365 \text{ days})(1 \text{ MG}/1000000 \text{ Gal})$   
 $= 0.003310(\#Acres)(Cr) \text{ MGD}$

Note: Changes to the stormwater runoff areas primarily resulted from changing graveled property areas to bermed concrete areas or equipment-roofed areas. The attached listing accounts for these changes and affected area subtotals where changes are shown in bold type.

Source	Cr	#Acres	1-Day (MGD)	30-Day (MGD)	Apr-99
Area 1: Units 1&2 ESP, Chimney Area and Parking Lot to Units 1&2 Oil Separator to Ash Treatment Basin (001)					
a. Gravel Areas	0.225	0.44	0.0116	0.0003	
b. Asphalt Parking	0.825	1.88	0.1811	0.0051	
c. Grass (slope < 2%)	0.15	0.17	0.0030	0.0001	
d. Roof Drains	0.85	0.16	0.0159	0.0005	
Total Area 1		2.65	0.2115	0.0060	
Area 2: Unit 3 ESP, Chimney Area, and Warehouse Area to Unit 3 Oil Separator to Ash Treatment Basin (001)					
a. Gravel Area	0.225	0.7	0.0184	0.0005	
b. Gravel Area	0.225	0.36	0.0095	0.0003	
c. Asphalt Parking (Warehouses)	0.825	1.73	0.1666	0.0047	
d. Grass (slope < 2%)	0.15	0.05	0.0009	0.0000	
Total Area 2		2.84	0.1954	0.0055	
Area 3: Coal Storage and Handling Area to Coal Settling Basin to Ash Treatment Basin (001)					
a. Coal Pile	0.5	10.29	0.6007	0.0170	
b. Basin Surface	1	0.51	0.0595	0.0017	
Total Area 3		10.8	0.6602	0.0187	
Area 4: Units 1&2 Roof Drains to Cooling Tower Blowdown Ditch (002)					
a. Roof Drains	0.85	0.99	0.0982	0.0028	
b. Cooling Tower Direct Precipitation	1	0.46	0.0537	0.0015	
Total Area 4		1.45	0.1520	0.0043	
Area 5: Ash Treatment Basin (001)					
a. Basin Surface	1	114.8	13.4035	0.3800	
b. Grass & Woods (slope > 7%)	0.3	35.15	1.2312	0.0349	
Total Area 5		149.95	14.6347	0.4149	

Area 6: Non-Point Source Uncontaminated Runoff to Herrington Lake

a. Grass & Woods (slope <2%)	0.3	112.94	3.9559	0.1121
b. Dam Face (rip-rap)	0.5	14.08	0.8220	0.0233
c. Gravel Switch Yard	0.225	1.36	0.0357	0.0010
d. Grass & Woods (slope > 7%)	0.3	5.14	0.1800	0.0051
e. Grass & Woods (slope > 7%)	0.3	27.88	0.9765	0.0277
f. Grass (slope > 7%)	0.3	1.33	0.0466	0.0013
g. Grass (slope 2-7%)	0.2	0.96	0.0224	0.0006
h. Gravel Railroad Bed	0.225	1.56	0.0410	0.0012
i. Gravel Railroad Bed	0.225	2.54	0.0667	0.0019
j. Tractor Garage Roof Drains	0.85	0.09	0.0089	0.0003
k. Storage Building Roof Drain	0.85	0.02	0.0020	0.0001
l. Gravel Railroad Bed	0.225	3.3	0.0867	0.0025
m. Asphalt Road	0.825	2.7	0.2601	0.0074
n. Grass & Woods (slope > 7%)	0.3	31.76	1.1124	0.0315
o. Gravel Road	0.225	0.34	0.0089	0.0003
p. Gravel Switch Yard (Brown North)	0.225	5.35	0.1405	0.0040
q. Grass (slope > 7%)	0.3	6.56	0.2298	0.0065
r. Gravel Road (near Dispatch)	0.225	1.24	0.0326	0.0009
s. Asphalt Road (near Dispatch)	0.825	0.48	0.0462	0.0013
t. Grass (slope > 7%)	0.3	11.43	0.4004	0.0113
u. Roof Drains (Dispatch Buildings)	0.85	0.16	0.0159	0.0005
v. Oil Separator Surfaces	0.85	0.07	0.0069	0.0002
w. Rock-faced Slopes	0.5	0.32	0.0187	0.0005
Total Area 6		231.61	8.5169	0.2415

Area 7: Unit 3 Roof Drains to Cooling Tower Blowdown Ditch (003)

a. Roof Drains	0.85	1.46	0.1449	0.0041
b. Cooling Tower Direct Precipitation	1	0.58	0.0677	0.0019
Total Area 7		2.04	0.2126	0.0060

Area 8: Non-Point Source Uncontaminated Runoff to Dix River

a. Asphalt Road	0.825	2.03	0.1955	0.0055
b. Gravel Road	0.225	1.47	0.0386	0.0011
c. Grass (slope > 7%)	0.3	24.94	0.8736	0.0248
d. Westcliff Sub. & Gravel Road	0.225	0.75	0.0197	0.0006
e. Asphalt Road	0.825	0.46	0.0443	0.0013
f. Grass & Woods (slope > 7%)	0.3	57.05	1.9983	0.0567
g. Dam & Spill Way (Gravel/Rock)	0.5	15.54	0.9072	0.0257
h. Dix Sub. Gravel	0.225	0.81	0.0213	0.0006
Total Area 8		103.05	4.0985	0.1162

Area 9: Non-Point Source Uncontaminated Runoff to Dix River

a. Grass (slope 2-7%)	0.2	48.44	1.1311	0.0321
b. Grass (slope < 2%)	0.15	2.4	0.0420	0.0012
c. Grass (slope < 2%)	0.15	0.31	0.0054	0.0002
d. Asphalt Road	0.825	1.07	0.1031	0.0029
e. Grass (slope 2-7%)	0.2	24.09	0.5625	0.0159
f. Gravel Road	0.225	1.07	0.0281	0.0008
g. Asphalt Road	0.825	0.77	0.0742	0.0021
h. CT-Building Roofs	0.85	0.92	0.0913	0.0026
i. CT-Facility-Equipment Roofs	0.85	0.32	0.0318	0.0009
j. Asphalt "Loop" Road & Internal Surfaces	0.825	2.76	0.2659	0.0075
<b>k. Gravel Roads, Parking, &amp; CT Sub.</b>	<b>0.225</b>	<b>16.76</b>	<b>0.4403</b>	<b>0.0125</b>
l. Fuel Oil Railcar Unloading Area	0.225	0.38	0.0100	0.0003
m. Rock-Faced Slopes	0.5	2.65	0.1547	0.0044
n. Grass Areas (slope 2-7%)	0.2	35.46	0.8280	0.0235
<b>Total Area 9</b>		<b>137.4</b>	<b>3.7684</b>	<b>0.1068</b>

Area 10: Dry Fly Ash Handling (001)

a. Asphalt, Dry Ash Handling	0.825	0.07	0.0067	0.0002
<b>Total Area 10</b>		<b>0.07</b>	<b>0.0067</b>	<b>0.0002</b>

Area 11: Combustion Turbines Facility Area and Building Roof Drains  
to Ash Treatment Basin (001) through OS-1, OS-2, OS-3

a. CT-Facility Diked Transformer Pads	0.85	0.36	0.0357	0.0010
b. Fuel Oil Storage/Bermed Area	0.85	1.14	0.1131	0.0032
c. Fuel Oil Truck Diked Unloading	0.85	0.41	0.0407	0.0012
<b>d. CT-5,6 Facility Diked Equipment</b>	<b>0.85</b>	<b>0.18</b>	<b>0.0179</b>	<b>0.0005</b>
<b>Total Area 11</b>		<b>2.09</b>	<b>0.2074</b>	<b>0.0059</b>

ENCLOSURE 3



ENCLOSURE 4

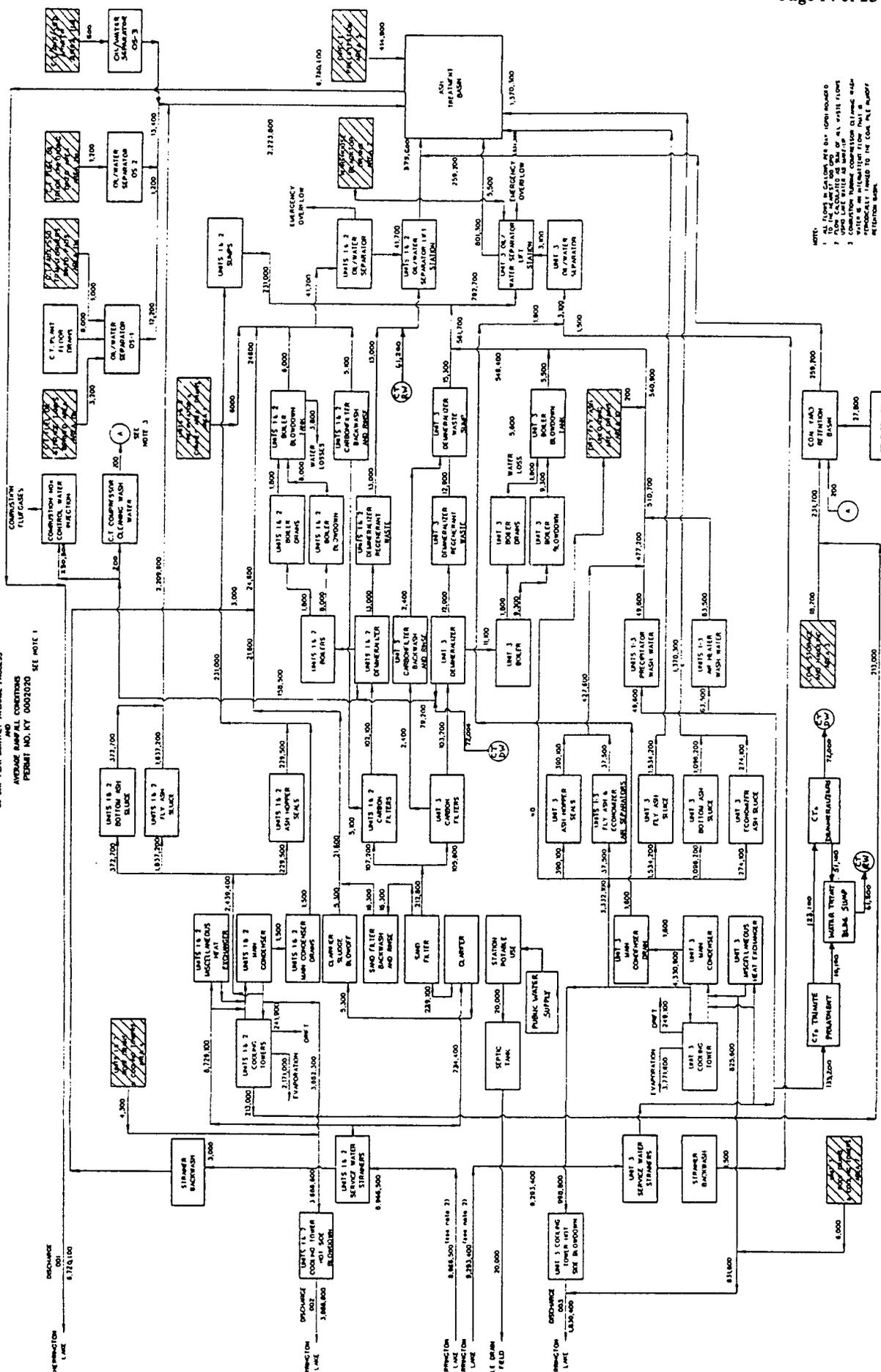


UNIT	NO.	NAME	REMARKS
1	1	UNIT 1	...
2	2	UNIT 2	...
3	3	UNIT 3	...
4	4	UNIT 4	...
5	5	UNIT 5	...
6	6	UNIT 6	...
7	7	UNIT 7	...
8	8	UNIT 8	...
9	9	UNIT 9	...
10	10	UNIT 10	...
11	11	UNIT 11	...
12	12	UNIT 12	...
13	13	UNIT 13	...
14	14	UNIT 14	...
15	15	UNIT 15	...
16	16	UNIT 16	...
17	17	UNIT 17	...
18	18	UNIT 18	...
19	19	UNIT 19	...
20	20	UNIT 20	...
21	21	UNIT 21	...
22	22	UNIT 22	...
23	23	UNIT 23	...
24	24	UNIT 24	...
25	25	UNIT 25	...
26	26	UNIT 26	...
27	27	UNIT 27	...
28	28	UNIT 28	...
29	29	UNIT 29	...
30	30	UNIT 30	...
31	31	UNIT 31	...
32	32	UNIT 32	...
33	33	UNIT 33	...
34	34	UNIT 34	...
35	35	UNIT 35	...
36	36	UNIT 36	...
37	37	UNIT 37	...
38	38	UNIT 38	...
39	39	UNIT 39	...
40	40	UNIT 40	...
41	41	UNIT 41	...
42	42	UNIT 42	...
43	43	UNIT 43	...
44	44	UNIT 44	...
45	45	UNIT 45	...
46	46	UNIT 46	...
47	47	UNIT 47	...
48	48	UNIT 48	...
49	49	UNIT 49	...
50	50	UNIT 50	...

UNIT	NO.	NAME	REMARKS
1	1	UNIT 1	...
2	2	UNIT 2	...
3	3	UNIT 3	...
4	4	UNIT 4	...
5	5	UNIT 5	...
6	6	UNIT 6	...
7	7	UNIT 7	...
8	8	UNIT 8	...
9	9	UNIT 9	...
10	10	UNIT 10	...
11	11	UNIT 11	...
12	12	UNIT 12	...
13	13	UNIT 13	...
14	14	UNIT 14	...
15	15	UNIT 15	...
16	16	UNIT 16	...
17	17	UNIT 17	...
18	18	UNIT 18	...
19	19	UNIT 19	...
20	20	UNIT 20	...
21	21	UNIT 21	...
22	22	UNIT 22	...
23	23	UNIT 23	...
24	24	UNIT 24	...
25	25	UNIT 25	...
26	26	UNIT 26	...
27	27	UNIT 27	...
28	28	UNIT 28	...
29	29	UNIT 29	...
30	30	UNIT 30	...
31	31	UNIT 31	...
32	32	UNIT 32	...
33	33	UNIT 33	...
34	34	UNIT 34	...
35	35	UNIT 35	...
36	36	UNIT 36	...
37	37	UNIT 37	...
38	38	UNIT 38	...
39	39	UNIT 39	...
40	40	UNIT 40	...
41	41	UNIT 41	...
42	42	UNIT 42	...
43	43	UNIT 43	...
44	44	UNIT 44	...
45	45	UNIT 45	...
46	46	UNIT 46	...
47	47	UNIT 47	...
48	48	UNIT 48	...
49	49	UNIT 49	...
50	50	UNIT 50	...

UNIT	NO.	NAME	REMARKS
1	1	UNIT 1	...
2	2	UNIT 2	...
3	3	UNIT 3	...
4	4	UNIT 4	...
5	5	UNIT 5	...
6	6	UNIT 6	...
7	7	UNIT 7	...
8	8	UNIT 8	...
9	9	UNIT 9	...
10	10	UNIT 10	...
11	11	UNIT 11	...
12	12	UNIT 12	...
13	13	UNIT 13	...
14	14	UNIT 14	...
15	15	UNIT 15	...
16	16	UNIT 16	...
17	17	UNIT 17	...
18	18	UNIT 18	...
19	19	UNIT 19	...
20	20	UNIT 20	...
21	21	UNIT 21	...
22	22	UNIT 22	...
23	23	UNIT 23	...
24	24	UNIT 24	...
25	25	UNIT 25	...
26	26	UNIT 26	...
27	27	UNIT 27	...
28	28	UNIT 28	...
29	29	UNIT 29	...
30	30	UNIT 30	...
31	31	UNIT 31	...
32	32	UNIT 32	...
33	33	UNIT 33	...
34	34	UNIT 34	...
35	35	UNIT 35	...
36	36	UNIT 36	...
37	37	UNIT 37	...
38	38	UNIT 38	...
39	39	UNIT 39	...
40	40	UNIT 40	...
41	41	UNIT 41	...
42	42	UNIT 42	...
43	43	UNIT 43	...
44	44	UNIT 44	...
45	45	UNIT 45	...
46	46	UNIT 46	...
47	47	UNIT 47	...
48	48	UNIT 48	...
49	49	UNIT 49	...
50	50	UNIT 50	...

UNIT 1  
UNIT 2  
UNIT 3  
UNIT 4  
UNIT 5  
UNIT 6  
UNIT 7  
UNIT 8  
UNIT 9  
UNIT 10  
UNIT 11  
UNIT 12  
UNIT 13  
UNIT 14  
UNIT 15  
UNIT 16  
UNIT 17  
UNIT 18  
UNIT 19  
UNIT 20  
UNIT 21  
UNIT 22  
UNIT 23  
UNIT 24  
UNIT 25  
UNIT 26  
UNIT 27  
UNIT 28  
UNIT 29  
UNIT 30  
UNIT 31  
UNIT 32  
UNIT 33  
UNIT 34  
UNIT 35  
UNIT 36  
UNIT 37  
UNIT 38  
UNIT 39  
UNIT 40  
UNIT 41  
UNIT 42  
UNIT 43  
UNIT 44  
UNIT 45  
UNIT 46  
UNIT 47  
UNIT 48  
UNIT 49  
UNIT 50



KENTUCKY UTILITIES COMPANY  
E.W. BROWN GENERATING STATION  
WATER BALANCE DIAGRAM  
30 DAY YEAR MONTHLY AVERAGE PROCESS  
AVERAGE BASED ON ALL CONDITIONS  
PERMIT NO. KY 0002020 SEE NOTE 1

7.9.84

UNIT 1  
UNIT 2  
UNIT 3  
UNIT 4  
UNIT 5  
UNIT 6  
UNIT 7  
UNIT 8  
UNIT 9  
UNIT 10  
UNIT 11  
UNIT 12  
UNIT 13  
UNIT 14  
UNIT 15  
UNIT 16  
UNIT 17  
UNIT 18  
UNIT 19  
UNIT 20  
UNIT 21  
UNIT 22  
UNIT 23  
UNIT 24  
UNIT 25  
UNIT 26  
UNIT 27  
UNIT 28  
UNIT 29  
UNIT 30  
UNIT 31  
UNIT 32  
UNIT 33  
UNIT 34  
UNIT 35  
UNIT 36  
UNIT 37  
UNIT 38  
UNIT 39  
UNIT 40  
UNIT 41  
UNIT 42  
UNIT 43  
UNIT 44  
UNIT 45  
UNIT 46  
UNIT 47  
UNIT 48  
UNIT 49  
UNIT 50

**E. W. BROWN GENERATING STATION**  
**1999 KPDES Modification - Adjustments for the 5th and 6th Combustion Turbines (CTs)**  
**(Changes Shown in Bold Type)**

Apr-99

CT Process Flows Added to the Water Balance Diagram

Process Flows are reported on the KPDES Water Balance Diagram as "Peak Monthly Average Conditions" (PMAC). This calculation involves a monthly average flowrate based upon:

- + 28 days at Average Operating Conditions
- + 1 day at Maximum Operating Conditions
- + 1 day No Operations (or alternately performing maintenance)
- 30 day Averaged Flowrate

Generally, these permit modifications address increased demineralized (DM) water consumption, DM water production regeneration flows, adjusted stormwater runoff calculations, and installation of new containment equipment for potential oil-bearing streams. Two additional DM water storage tanks (new total of four, 850,000 gal tanks) will be constructed which will allow for several days of operation of the new CTs if there were an DM unit outage. The KYDAQ Permit to Operate and CEMS requirements restrict operations to less than 28.5% and 10% per year, respectively, although it is possible to run continuously for short periods (e.g. 24 hrs). Therefore, CT operations are ASSUMED to be 10% (2.4 hr/day) as a monthly average condition and one 24-hr-continuous day at maximum operation

1. CT NOx Control Water Injection  
Average Operations (Site Conditions, 2.4 hrs/day - per ABB-Turbine Manufacturer spec.)  
CTs 1-4 @ 110 MW nominal each  
10,348 [gal/hr/machine] = 24,835 [gal/day/machine] DM Water Injection  
**CTs 5,6 @ 165 MW nominal each**  
7,902 [gal/hr/machine] = 18,964 [gal/day/machine] DM Water Injection  
According to operating constraints described above:  
137,270 [gal/day] DM Water Injection (for all 6 CT's)

Maximum Operations (24 hrs/day per ABB spec.)  
CTs 1-4 @ 149 MW each  
20,516 [gal/hr/machine] = 492,384 [gal/day/machine] DM Water Injection  
**CTs 5,6 @ 165 MW, Fuel Oil each**  
22,806 [gal/hr/machine] = 547,344 [gal/day/machine] DM Water Injection  
According to operating constraints described above:  
3,064,224 [gal/day] DM Water Injection (for all 6 CT's)

Peak Monthly Average Conditions  
**PMAC = (28 days x 137,268 gal/day + 1 day x 306,421 gal/day + 0) / 30 days**  
**= 230,260 [gal/day] = 230,300 [gal/day] (rounded to nearest 100 gpd)**

2. CT Compressor Cleaning Wash Water  
Average Conditions  
0 [gal/day] maintenance activity only  
Maximum Conditions  
0 [gal/day] maintenance activity only  
Maintenance Activity

Because the KPDES permit covers operation of 6 CTs, the maintenance will include a maximum of 6 compressor washes (for all 6 CTs) during a given month (a relatively infrequent activity). Washes consist of 1 cleaning solution volume (71 gal) and 4 rinse volumes (4 x 71 gal) for a total volume of 355 gal. The manufacturer (ABB) suggests several wash cycles may be required; ASSUME 3 wash cycles/machine for each of 6 machines during one month.

Peak Monthly Average Conditions  
**PMAC = (28 days x 0 gal/day + 1 day x 0 gal/day + 3 x 6 x 355 gal) / 30 days**  
**= 213 [gal/day] = 200 [gal/day] (rounded to nearest 100 gpd)**

CT Process Flows Added to the Water Balance Diagram - cont'd

3. Units 1&2 and Unit 3 Water Demineralizers & Associated Process Flow Changes  
Analysis of DM water requirements concluded the need for new DM production equipment. Therefore, both the existing and new DM production units will be used. Flows will be estimated DM water consumption rates from planned CT operations but DM unit regenerant wastes will be estimated for maximum DM water production rates (450 gpm continuous). This will assure flexibility, account for DM resin performance degradation and represent unplanned/infrequent, but realistic conditions of high demand rates. There will be additional DM water storage at the CT site and cross-connection to the EWBrown steam unit storage system as well. Flows estimated for the existing DM units will remain the same as currently permitted.

Existing and New DM Pretreatment Backwash & Rinse Flow Rates Basis:

- A. Units 1-2 Carbon Filters Backwash & Rinse Operations (existing continued)  
PMAC = 5100 GPD
- B. Unit 3 Carbon Filters Backwash & Rinse Operations (existing continued)  
PMAC = 2400 GPD
- C. New Demineralizer TRIMITE Pretreatment Unit (Nominal 2 x 350 gpm trains @ 5 NTU lakewater)  
Assume: Pretreatment trains run typically @ 1 x 450 gpm continuous DM train rating  
28 days@ 450 gpm, 1 day @ 900 gpm, 1 maintenance day @ 0 flows  
Absorption-Clarifier Section = 2 trains x 2700 gal/regeneration @ 3 cycles/day  
Gravity Sand/Anthracite Filter = 2 trains x 7000 gal/regeneration @ 10 cycles/28 days  
**PMAC = 10125.83 = 10,100 GPD Combined TRIMITE Pretreatment Trains**

Existing and New Demineralizer Regenerant Waste Flows Basis:

- A. Units 1-2 Primary and Secondary Demineralizers (per existing, maximum rates)  
PMAC = 13,000 GPD
- B. Unit 3 Primary and Secondary Demineralizers (per existing, maximum rates)  
PMAC = 12,900 GPD
- C. New Water Treatment Demineralizer Trains (2 @ 450 gpm, 24 hrs/day)  
Assume: Demineralizer trains run typically @ 1 x 450 gpm continuous rating  
28 days@ 450 gpm, 1 day @ 900 gpm, 1 maintenance day @ 0 flows  
Cation Regeneration Wastewater = 16,300 gal/cycle, 255,000 gal/regeneration  
= 41,421 GPD/train  
Anion Regeneration Wastewater = 8,900 gal/cycle, 505,000 gal/regeneration  
= 11,420 GPD/train  
**PMAC = 51,080 = 51,100 GPD (both DM trains)**

4. CT Plant Oily Water Drains (existing, unchanged)  
The two, six-inch CT plant Oily Drains are not routinely used for any type of flow. However, maintenance activities or accidental leaks/spills of any fluids may be directed into these drains. The calculation will assume no flows for average or maximum operating conditions, but will ASSUME a 1-day, 8-hr shift maximum maintenance flow in one of the two, 6-inch drains. Calculations will be based upon a 500 gpm flowrate to match the rated capacity of the oil water separator and lift station receiving this flow.

Peak Monthly Average Conditions:

$$\begin{aligned} \text{PMAC} &= (28 \text{ days} + 1 \text{ day}) \times 0 \text{ gal/day} + 500 \text{ gpm} \times 60 \text{ min/hr} \times 8 \text{ hr} / 30 \text{ days} \\ &= 8000 \text{ GPD} \end{aligned}$$

CT Process Flows Added to the Water Balance Diagram - cont'd

5. Precipitation onto Fuel Oil Storage and Unloading Areas (Areas 11.b & 11.c = unchanged)

Average and Maximum Rainfall Calculations specific to the Bermed Fuel Oil Storage Tank Area and Diked Roadway of the Fuel Oil Unloading Area are described here.

These potentially oil-bearing streams are directed to CT oil/water separator OS-1.

Rainfall Basis ASSUMES: 4.3 in/day = Maximum 10-Yr, 24-hr Rainfall

44.49 in/yr = Annual Average Rainfall

Bermed Fuel Oil Storage Tank Area = 1.14 acres

Area Runoff Coefficient = 0.85

$$\begin{aligned} \text{Max} &= 4.3 \text{ in/day} \times (1 \text{ ft}/12 \text{ in}) \times 1.14 \text{ acres} \times 43,560 \text{ ft}^2/\text{acre} \times 7.481 \text{ gal}/\text{ft}^3 \times 0.85 \\ &= 113151 = 113,200 \text{ GPD Area 11.b} \end{aligned}$$

$$\begin{aligned} \text{Avg} &= 44.49 \text{ in/yr} \times (1 \text{ ft}/12 \text{ in}) \times (1 \text{ yr}/365 \text{ days}) \times 1.14 \text{ acres} \times 43,560 \text{ ft}^2/\text{acre} \times 7.481 \text{ gal}/\text{ft}^3 \times 0.85 \\ &= 3207.448 = 3200 \text{ GPD Area 11.b} \end{aligned}$$

Diked Fuel Oil Truck Unloading Area = 0.41 acres

Area Runoff Coefficient = 0.85

$$\begin{aligned} \text{Max} &= 4.3 \text{ in/day} \times (1 \text{ ft}/12 \text{ in}) \times 0.41 \text{ acres} \times 43,560 \text{ ft}^2/\text{acre} \times 7.481 \text{ gal}/\text{ft}^3 \times 0.85 \\ &= 40,700 \text{ GPD Area 11.c} \end{aligned}$$

$$\begin{aligned} \text{Avg} &= 44.49 \text{ in/yr} \times (1 \text{ ft}/12 \text{ in}) \times (1 \text{ yr}/365 \text{ days}) \times 0.41 \text{ acres} \times 43,560 \text{ ft}^2/\text{acre} \times 7.481 \text{ gal}/\text{ft}^3 \times 0.85 \\ &= 1,200 \text{ GPD Area 11.c} \end{aligned}$$

6. Precipitation onto Auxilliary and CT Transformers (Area 11.a and new Area 11.d)

The CT's individual transformers, auxilliary transformers, and Static Starting Devices (SSD's) account for an area = 0.36 acres. This electrical equipment is located on diked concrete pads drained into the plant oily waste lines (to OS-2).

The new CT-5,6 areas include unit/auxilliary transformers, SSDs, and a few other diked areas containing potential oil leak areas such as the fuel oil injection modules and areas immediate to the CT lubrication systems equipment. These new flows are routed to a new CT-area oil/water separator (OS-3) which is then pumped to the ATB.

Rainfall Calculation Basis:

4.3 in/day =	Maximum 10-Yr, 24-hr Rainfall
44.49 in/yr =	Annual Average Rainfall
0.36 acres =	CT 1-4 Aux. & CT Transformers, CT-SSD's
<b>0.18 acres =</b>	<b>CT 5-6 Aux. &amp; CT Transformers, CT-SSD's, Fuel Inj.</b>
Cr = 0.85 =	Area Runoff Coefficient

$$\begin{aligned} \text{Max} &= 4.3 \text{ in/day} \times (1 \text{ ft}/12 \text{ in}) \times 0.36 \text{ acres} \times 43,560 \text{ ft}^2/\text{acre} \times 7.481 \text{ gal}/\text{ft}^3 \times 0.85 \\ &= 35,700 \text{ GPD CT 1-4 Area 11.a} \\ &= 17,900 \text{ GPD CT 5-6 Area 11.d} \end{aligned}$$

$$\begin{aligned} \text{Avg} &= 44.49 \text{ in/yr} \times (1 \text{ ft}/12 \text{ in}) \times (1 \text{ yr}/365 \text{ days}) \times 0.36 \text{ acres} \times 43,560 \text{ ft}^2/\text{acre} \times 7.481 \text{ gal}/\text{ft}^3 \times 0.85 \\ &= 1,000 \text{ GPD CT 1-4 Area 11.a} \\ &= 500 \text{ GPD CT 5-6 Area 11.d} \end{aligned}$$

ENCLOSURE 6

JUL 31 1993 00:55PM ABB ENI

**ABB**

Data Sheet 1

P. 1  
Technical  
Data **Y****Cleaning Agent, TURBOTECT "1020"**

**Manufacturer:** TURBOTECT. LTD.

**Designation:** TURBOTECT "1020" (Off-Line cleaning fluid)

**Description:** A water-soluble organic fluid containing no abrasive materials. TURBOTECT "1020" contains no phosphates and conforms to specifications MIL-C-85570, Type II.

**Flash point:** Non-combustible in the concentrations for use.

**Density:** 1.01 g/cm<sup>3</sup>

**Viscosity:** -

**Setting Point:** -1°C

**Boiling Point:** 100°C

**Ash Content:** -

**Handling:** Like all chemical products of a similar nature (surface-active agents), this product should not come into prolonged contact with the skin. As with all surface-active agents, the use of safety glasses is recommended to prevent it from burning the eyes. If properly handled, however, it does not cause any long-lasting skin irritation. The product is up to 95% bio-degradable and can safely be put into the public waste water system.

**Use:** The product is specially formulated to remove deposits in gas turbine compressors. It contains suitable detergents and an additive to protect against corrosion. It is used in a concentration of approx. 25%.

**Storage:** TURBOTECT "1020" has an unlimited shelf life.

**Packaging:** In 208 ltr drums.

**Order from:** TURBOTECT. LTD.  
P.O. Box  
CH-5401 Baden

**Amounts of Fluid for Washing and Flushing with TURBOTECT "1020"**

Outdoor Temperature	-5°C to +8°C	Above +8°C
<b>Cycle</b>		
<b>Washing</b> Duration: 2 times, each from 1-2 minutes long	200 ltr Water 70 ltr TURBOTECT "1020"	200 ltr Wasser 70 ltr TURBOTECT "1020"
<b>Flushing</b> Duration: 2 times, each from 1-2 minutes long	220 ltr Water (5 parts) 50 ltr Ethanol or Isopropanol (1 part)	270 ltr Water

For hand cleaning of the compressor inlet guide vane row, use a 25% solution.

Water quality required: Tap water with pH=8.

**ABB**

## Data Sheet 2

**Cleaning Agent, TURBOTECT "1027"**

**Manufacturer:** TURBOTECT, LTD.

**Designation:** TURBOTECT "1027" (Off-Line cleaning fluid)

**Description:** A organic fluid containing no abrasive materials emulsifiable in water. TURBOTECT "1027" contains no phosphates and conforms to specifications MIL-C-85704A. The product contains organic solvents to dissolve oily and greasy deposits.

**Flash point:** 85°C

**Density:** 0.98 g/cm<sup>3</sup>

**Viscosity:** 20cSt at 26.7°C

**Setting Point:** -12°C

**Boiling Point:** 177°C

**Ash Content:** <0.05%

**Handling:** Like all chemical products of a similar nature (surface-active agents and solvent), this product should not come into prolonged contact with the skin. As with all surface-active agents, the use of safety glasses is recommended to prevent it from burning the eyes. If properly handled, however, it does not cause any long-lasting skin irritation. Because the product contains solvents, it is recommended that that constituent be separated out by breaking the emulsion and then be treated as old oil. The detergents are bio-degradable.

**Use:** The product is specially formulated to remove oily and greasy deposits in gas turbine compressors. It contains suitable detergents and an additive to protect against corrosion. It is used in a concentration of approx. 20%.

**Storage:** TURBOTECT "1027" has an unlimited shelf life.

**Packaging:** In 208 ltr drums.

**Order from:** TURBOTECT, LTD.  
P.O. Box  
CH-5401 Baden

**Amounts of Fluid for Washing and Flushing with TURBOTECT "1027"**

Outdoor Temperature	-6°C to -8°C	Above +8°C
<b>Cycle</b>		
<b>Washing</b> Duration: 2 times, each from 1-2 minutes long	218 ltr Water 52 ltr TURBOTECT "1027"	218 ltr Wasser 62 ltr TURBOTECT "1027"
<b>Flushing</b> Duration: 2 times, each from 1-2 minutes long	220 ltr Water (5 parts) 50 ltr Ethanol or Isopropanol (1 part)	270 ltr Water

For hand cleaning of the compressor inlet guide vane row, use a 20% solution.

Water quality required: Typ water with pH5-8.

**MATERIAL SAFETY DATA SHEET****TURBOTECT 1020**

SPRAYTEC, INC.  
PO Box 676  
Brookfield, CT 06804

Chemtrec No.: 800/424-9300  
Emergency Phone: 203/775-8445  
Date: 15 July 1992

**SECTION I - GENERAL INFORMATION**

D.O.T. HAZARD CLASS: None  
D.O.T. ID NUMBER: None  
NFPA HAZARD RATING: (Health: 1) (Flammability: 0) (Reactivity: 0)

**SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

COMPONENT:	CAS NO:	TLV:
Dipropylene glycol methyl ether	34590-04-8	100 ppm
Morpholine	110-91-8	25 ppm
Dichloroamine	111-42-2	7 ppm

**SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS**

BOILING POINT: 100°C (212°) F  
SPECIFIC GRAVITY: 1.01 gm/cm<sup>3</sup> at 25° C (77° F)  
VAPOR PRESSURE: Not known  
VAPOR DENSITY: Not known  
SOLUBILITY IN WATER: Complete  
APPEARANCE AND ODOR: Pale yellow liquid; Mild odor  
NOTE: The above information is not intended for use in preparing product specifications. Contact Spraytec, Inc. before writing specifications

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT: None to building  
LEL: N/A UEL: N/A  
EXTINGUISHING MEDIA: Water fog, Dry chemical, or Carbon dioxide  
SPECIAL FIRE FIGHTING PROCEDURES: Keep fire-exposed containers cool with water fog. Do not use a direct water stream-product may float on surface of water and reignite. Use full turnout gear including NIOSH-approved SCBA (as recommended by NFPA).

**SECTION V - REACTIVITY DATA**

STABILITY: Stable  
HAZARDOUS POLYMERIZATION: Will not occur  
MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing agents

**SECTION VI - HEALTH HAZARD DATA**

EYES: Can cause temporary irritation, redness, tearing, blurred vision.  
SKIN: Prolonged or repeated contact can cause irritation, drying or dermatitis.  
SWALLOWING: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

## TURBOTECT 1020

**SECTION VII - EMERGENCY AND FIRST AID PROCEDURES**

**EYES:** Flush with large amounts of clean water. Seek medical attention.  
**SKIN:** Thoroughly wash exposed areas with soap and water.  
**INGESTION:** Induce vomiting. Seek immediate medical attention.

**SECTION VIII - SPILL OR LEAK PROCEDURES**

Stop spill at source. Dike off area to prevent spreading, and prevent run-off from entering sewers, streams or other bodies of water. Pump or recover any free product to salvage tanks. Minimize breathing of vapors and ventilate confined spaces. Add sand, earth or absorbent material to remaining material. Assume conformity with applicable government regulations.

**SECTION IX - WASTE DISPOSAL/EMPTY CONTAINERS**

Empty containers retain hazardous product residue and vapor. Do not pressure, cut, weld, braze, drill, grind, or expose containers to heat. Do not reuse empty drums or attempt to clean. Empty drums should be drained, properly bunged and returned to a drum reconditioner or disposed of in accordance with governmental regulations.

**SECTION X - PROTECTION AND PRECAUTIONS**

**VENTILATION:** Use only with adequate ventilation to prevent exceeding exposure.  
**RESPIRATION:** Use self-contained approved breathing apparatus in confined or enclosed space.  
**GLOVES:** Use chemical-resistant gloves to avoid prolonged or repeated skin contact.  
**EYE PROTECTION:** Use splash goggles or face shield where eye contact may occur.  
**OTHER PRECAUTIONS:** Keep containers closed when not in use. Do not store near heat, open flames or strong oxidants.

**SECTION XI - STATE COMPLIANCE IDENTITY INFORMATION**

COMPONENT:	CAS NO:	AMOUNT:
Water	7732-18-5	> 90 %
Dipropylene glycol methyl ether	34590-94-8	< 10 %
Morpholine	110-91-8	< 1 %
Nonylphenoxypropyl(ethyleneoxy)ethanol	9016-43-9	< 10 %
Caprimide DEA	136-26-3	< 10 %

**SARA TITLE III, SECTION 313**

This notification is incorporated into the Material Safety Data Sheet (MSDS) for the Spraytec product named above. When physically attached to the MSDS, this notification must not be detached from the MSDS. Any copying and redistribution of the MSDS to which this notification is attached must include copying and redistribution of this notification.

This Spraytec product contains no toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372 in excess of the applicable de minimus concentration.

The information and recommendations contained herein are, to the best of Spraytec's knowledge and belief, accurate and reliable. Spraytec does not warrant or guarantee their accuracy or reliability, and Spraytec shall not be liable for any loss or damage arising out of the use thereof.

**MATERIAL SAFETY DATA SHEET****TURBOTECT 1027**

SPRAYTEC, INC.  
P.O. Box 676  
Brookfield, CT 06804

Emergency Phone: (203) 775-8443  
Chemical no.: 800-424-9300

**SECTION I - GENERAL INFORMATION**

D.O.T. HAZARD CLASS: Combustible Liquid NOS  
D.O.T. ID NUMBER: NA 1993  
NFPA HAZARD RATING: [Health: 1] [Flammability: 2] [Reactivity: 0]

**SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

COMPONENT:	CAS NO:	TLV:
Water	7732-18-5	Not Established
Petroleum Distillate	64742-06-5	Not Established
Nonylphenoxypoly (ethyleneoxy)ethanol	9016-43-9	Not Established
Dipropylene glycol methyl ether	34590-94-8	100ppm (skin)
Hexylene glycol	107-41-5	25 ppm-C

**SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS**

BOILING POINT: 177° C (350° F)  
SPECIFIC GRAVITY: 0.93 gm/cm<sup>3</sup> at 25° C (77° F)  
VAPOR PRESSURE: < 1 mm Hg at 25° C (77° F)  
VAPOR DENSITY: > 1 (Air = 1)  
SOLUBILITY IN WATER: Complete  
APPEARANCE AND ODOR: Clear aqua liquid; Mild aromatic hydrocarbon odor.

NOTE: The above information is not intended for use in preparing product specifications. Contact Spraytec, Ltd. before writing specifications.

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT: 85° C (185° F) (PMCC)  
LEL: N/A UEL: N/A  
EXTINGUISHING MEDIA: Water fog, Dry chemical, or Carbon dioxide  
SPECIAL FIRE FIGHTING PROCEDURES: Self contained breathing apparatus and protective clothing should be used in fighting fires involving chemicals.

**SECTION V - REACTIVITY DATA**

STABILITY: Stable  
HAZARDOUS POLYMERIZATION: Will not occur  
MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing agents such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

**TURBOTECT 1027****SECTION VI - HEALTH HAZARD DATA**

**EYES:** Can cause severe irritation, redness, tearing, and blurred vision.  
**SKIN:** Prolonged or repeated contact can cause irritation, drying or dermatitis.  
**INHALATION:** Can cause nasal and respiratory irritation, dizziness, fatigue, headache, unconsciousness or asphyxiation.  
**SWALLOWING:** Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into lungs can cause mild to severe pulmonary injury or chemical pneumonitis which can be fatal.

**SECTION VII - EMERGENCY AND FIRST AID PROCEDURES**

**EYES:** Flush with large amounts of clean water. Seek medical attention.  
**SKIN:** Thoroughly wash exposed areas with soap and water.  
**INHALATION:** If affected, remove from exposure and seek immediate medical attention. If breathing is difficult or has stopped, administer artificial resuscitation and oxygen if available.  
**INGESTION:** DO NOT induce vomiting. Seek immediate medical attention.

**SECTION VIII - SPILL OR LEAK PROCEDURES**

Shut off and eliminate all ignition sources. Keep people away. Stop spill at source. Dike off area to prevent spreading, and prevent run-off from entering sewers, streams or other bodies of water. Pump or recover any free product to salvage tanks. Minimize breathing of vapors and ventilate confined spaces. Add sand, earth or absorbent material to remaining material. Assure conformity with applicable governmental regulations.

**SECTION IX - WASTE DISPOSAL/EMPTY CONTAINERS**

Empty containers retain hazardous product residue and vapor. Do not pressurize, cut, weld, braze, drill, grind, or expose containers to heat. Do not reuse empty drums or attempt to clean. Empty drums should be drained, properly bused and returned to a drum reconditioner or disposed of in accordance with governmental regulations.

**SECTION X - PROTECTION AND PRECAUTIONS**

**VENTILATION:** Use only with adequate ventilation to prevent exceeding exposure.  
**RESPIRATION:** Use self-contained approved breathing apparatus in confined or enclosed space.  
**GLOVES:** Use chemical-resistant gloves to avoid prolonged or repeated skin contact.  
**EYE PROTECTION:** Use splash goggles or face shield where eye contact may occur.  
**OTHER PRECAUTIONS:** Keep containers closed when not in use. Do not store near heat, open flames or strong oxidants.

The information and recommendations contained herein are, to the best of Spraytec's knowledge and belief, accurate and reliable. Spraytec does not warrant or guarantee their accuracy or reliability, and Spraytec shall not be liable for any loss or damage arising out of the use thereof.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S3**

Responding Witness: Lonnie E. Bellar

- Q-3. Refer to the response to the Commission's March 16 and 19, 1999 Orders, Item 16. When did the construction actually begin on the two CTs?
- A-3. For purposes of the air permit to construct, the construction on the two new CTs began with the signing by LG&E Capital Corp. of the contract with ABB to purchase the turbine units on November 2, 1998.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S4**

Responding Witness: Caryl M. Pfeiffer

Q-4. Refer to the response to the Commission's March 16 and 19, 1999 Orders, Item 16(b). Included in the response is the statement, "The two new CTs represent Phases IV (April 1998) and V (April 1999) and thus construction must commence by October 1999 and October 2000, respectively."

- a. Given this statement, explain in detail how the 18-month requirement contained in the air quality permit is applicable when construction of the Phase V CT appears to have begun prior to April 1999.
- b. Provide copies of any interpretations by the Kentucky Division of Air Quality which support the position that the actual construction of the Phase V CT could commence prior to the date listed in the phased construction schedule of the air quality permit.
- c. Based on the information provided in this proceeding by LG&E and KU, explain why KU is not in violation of the phased construction schedule contained in its air quality permit for the Brown station.

A-4. a. The April 1999 date for the Phase V CT in the air permit to construct is the date on which the 18 month "clock" starts, making October 2000 the latest possible date by which construction can commence on the Phase V CT. There is no prohibition on starting construction on a Phase before the 18-month "clock" date as long as a permit to construct for the project has been issued.

- b. KU has no written interpretations from the KYDAQ regarding commencement of construction, other than General Condition 3 in the permit to construct itself.

General Condition 3: Unless construction is commenced on or before eighteen months from the date of this permit or if construction is commenced and then stopped for any consecutive period of 18 months or more, then this construction permit shall become null and void.

However, we have met with the KYDAQ and discussed this issue with respect to the phased construction schedule in the permit for the two new CTs and they expressed no concern.

ITEM NO. PSC-S4  
PAGE 1 OF 2  
WITNESS Pfeiffer

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

- c. KU is not in violation of the phased construction schedule in the air permit to construct because:
- 1) the original construction at the CT site was commenced on or before 18 months from the date of the permit issuance; and
  - 2) KU has commenced construction on each phase in a timely manner (before the 18 month "clock" ran out on each phase).

ITEM NO. PSC-54  
PAGE 2 OF 2  
WITNESS Pfeiffer

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S5**

Responding Witness: Ronald L. Willhite  
Michael D. Robinson

- Q-5. Refer to the response to the Commission's March 16 and 19, 1999 Orders, Item 18(d). Explain in detail how the decision to not allocate any of the incurred work order costs to date to LG&E Capital Corp. does not constitute the subsidization of LG&E Capital Corp. operations by KU.
- A-5. LG&E Capital Corp. is not being subsidized by KU at this time because LG&E Capital Corp. owns and is constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for the CCN and CEC. If the Commission denies the application of LG&E and KU for a CCN and CEC, then it will be appropriate to bill the cost being charged to work orders plus a finance charge to LG&E Capital Corp. The existing work order system allows for the timely and accurate capture of charges.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S6**

Responding Witness: Lonnie E. Bellar

- Q-6. Refer to the response to the Commission's March 16 and 19, 1999 Orders, Item 19. The response includes the statement, "The cost of the CTs at the time of the transfer will be less than the fair market value."
- a. Has KU or LG&E determined the fair market value of the CTs? If yes, provide the fair market value and explain in detail how the amount was determined.
  - b. If the fair market value of the CTs has not been determined, explain in detail how KU and LG&E have reached the conclusion that the cost of the CTs at the time of transfer will be less than fair market value.
- A-6. a. No.
- b. KU and LG&E concluded that the cost of the CTs at the time of transfer will be less than fair market value because KU and LG&E expect the costs of CTs to continue to rise. Please see the attached response to AG-13a.

ITEM NO. PSC-56  
PAGE 1 OF 2  
WITNESS Bellar

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

Question: AG-13

Responding Witness: Ronald L. Willhite

Q-13. On page 11 of his testimony, Mr. Willhite states that the "price of combustion turbines is expected to continue to rise". With respect to this statement:

- a. Please provide all documentation to support this statement.
- b. Please provide a projection of future CT prices that are the basis of this statement.

A-13.

- a. The expectation that CT prices will continue to rise is based on the observation that the summer 1998 purchase power price spikes has caused utilities to construct generation, particularly CTs, rather than rely totally on purchase power to satisfy near term capacity requirements. Therefore, the prices for CTs during this period are expected to rise as increased demand should create a corresponding increase in the price of new generating units.
- b. The basis of the statement is general in nature. The statement is not based on a specific projection of future CT prices; LG&E and KU do not possess such a projection at this time.

ITEM NO. PSC-56  
PAGE 2 OF 2  
WITNESS Bellar

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S7**

Responding Witness: Michael Robinson

Q-7. Refer to the response to the Commission's March 16 and 19, 1999 Orders, Item 20(b). KU was requested to provide a listing of the expenses it would incur to operate and maintain the CTs and explain how it would allocate those expenses to LG&E. While the allocation approach was provided, no listing of the operating and maintenance expenses was provided. Provide the originally requested information.

A-7. The costs to operate and maintain the CTs were estimated and included in the Company's "Application for a Certificate of Public Convenience and Necessity" on page 6, section 10. A listing of the general ledger expense accounts (in accordance with the FERC Uniform System of Accounts) to be used for direct expenses follows:

<u>Account</u>	<u>Description</u>
54601	Other Power Operations – Supervision and Engineering
54701	Other Power Operations – Fuel – Gas
54702	Other Power Operations – Fuel – Oil
54801	Other Power Operations – Other General Expense
92101	General & Administrative Costs
55101	Other Power Maintenance – Supervision and Engineering
55201	Other Power Maintenance – Structures
55301	Other Power Maintenance – General/Electric Plant
55401	Other Power Maintenance – Miscellaneous Plant

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S8**

Responding Witness: Lonnie E. Bellar  
Caryl M. Pfeiffer

- Q-8. Refer to the Amended Application filed on April 1, 1999, Exhibit A, the "Description of the Proposed Facility – Combustion Turbine Specifications." For each of the specifications listed below, provide the actual specifications of the CTs installed at the Brown station.
- a. Each CT will have a nominal output rating of 75 to 100 megawatts.
  - b. The heat input to each CT for these nominal ratings will be in the range of 900 to 1200 million BTU per hour.
  - c. Number two distillate fuel oil will be the primary fuel.
  - d. Number two distillate fuel oil will be stored at the site in sufficient quantities to assure an adequate supply to fuel the CTs.
  - e. At least two of the CTs will have fast start capability.
  - f. The exhaust gas generated by each CT will be in excess of 1 million cubic feet per minute and at a temperature of approximately 950 degrees Fahrenheit.
  - g. The commercial operating date of the first CT is scheduled to be the summer of 1994, with three more units in the summer of 1995.
  - h. KU's load forecast predicts the addition of three more CTs, one unit each in the summers of 1996, 1997, and 1998.
- A-8.
- a. Each existing CT has a nominal rating of 110 MWs.
  - b. The heat input for each existing CT is 1,368 mmBtu/hr at International Standardization Organization (ISO) standard conditions.
  - c. Each of the existing CTs is dual fuel capable (natural gas and No. 2 fuel oil). At the time of original installation of CTs at the Brown Site, natural gas was not available; thus No. 2 fuel oil was the primary fuel.
  - d. No. 2 fuel oil is stored in sufficient quantities (2-1.1 million-gallon aboveground storage tanks) to assure an adequate fuel supply to the CTs.

ITEM NO. PSC-S8

PAGE 1 OF 2

WITNESS Bellar/Pfeiffer

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

- e. All four of the existing CTs have fast start capability; but only two CTs can be "fast-started" simultaneously because only two starters are available on site.
- f. Each existing CT has an exhaust gas flow of 777,618 standard cubic feet per minute or 2,115,600 actual cubic feet per minute and an exhaust gas temperature of 950-1000 degrees Fahrenheit.
- g. The commercial operation dates for the existing Brown CTs are as follows:
- |          |          |
|----------|----------|
| Brown 9  | 8/09/94  |
| Brown 8  | 2/14/95  |
| Brown 10 | 12/22/95 |
| Brown 11 | 5/08/96  |
- h. Rather than purchase the CTs, KU was able to acquire economical purchase power.

ITEM NO. PSC-58  
PAGE 2 OF 2  
WITNESS Bellar/Pfeiffer

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

**Question: PSC-S9**

Responding Witness: Lonnie E. Bellar

- Q-9. Refer to the response to the Commission's March 16 and 19, 1999 Orders, Item 23(c), page 2 of 6. You indicated that one of the reasons for rejecting all of the proposals to sell power was that each proposal was more costly than the actively traded market.
- a. Provide a present worth analysis of each proposal received.
  - b. Provide a present worth analysis of the two proposed combustion turbines.
  - c. Explain how the CTs were the least cost. Provide all supporting calculations.
- A-9. a. The Net Present Value Analysis of the proposals is included in the attached table. Because several types of products were proposed, the responses were divided into categories and ranked within the categories. The categories include 16-Hour Call Options, 16-Hour Block Energy, and 16-Hour Options on Index. Twenty-one (21) responses are included in the table; five (5) responses were excluded because the products proposed were not suitable for comparison using net present value analysis.

The proposals for which power is not Firm (e.g. System Firm and/or Non-Firm) are disadvantageous, because the energy may be curtailed under various systems conditions and is therefore less reliable.

- b. Please see attached.
- c. The present worth analysis provided in response to part (a) above demonstrates the conclusion stated in the response to Question PSC-23 -- that the prices proposed by all responding parties are higher than or basically equivalent to those used as estimates in the Resource Assessment. Since the prices used in the Resource Assessment were lower cost than the RFP responses, and the CTs were the least cost alternative in the Resource Assessment, it follows that the CTs are the least cost alternative among the RFP responses. Thus, the Resource Assessment as presented serves both as the present worth analysis of the CTs and the explanation of how the CTs were determined to be least cost.

ITEM NO. PSC-59  
PAGE 1 OF 2  
WITNESS Bellar

**Question: PSC-S9 (a), (b)**

The information in response to this question is subject to a request for confidential protection under 807 KAR 5:001, Section 7. The original filed with the Commission contains the requested information. This information is omitted in all other copies submitted herewith.

ITEM NO. PSC-S9  
PAGE 2 OF 2  
WITNESS Bellar

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

Question: PSC-S10

Responding Witness: Lonnie E. Bellar

Q-10. Refer to the page entitled Request for Proposals filed on April 1, 1999.

- a. Will your need for power be limited to the months of June, July, and August for the years 1999 through 2002?
- b. How many hours are each of the CTs projected to operate in each year from 1999 through 2002?
- c. Will your need for the proposed CTs be limited to June, July, and August for the years 1999 through 2002?
- d. The RFP stated that the desired energy strike price is \$150/MWH. Explain how this number was derived.

A-10. a. No. The Companies will have peaking needs beyond 2002. The request concentrated on incremental peaking power needs thus the specification of the peak months of June, July and August. In the other months, existing sources or economic purchases will provide peaking power.

- b. The hours the CTs are projected to operate for native load are shown below. Their scheduled in-service date is 8/01/99.

	<u>Brown 7</u>	<u>Brown 6</u>
1999	92	43
2000	503	323
2001	557	414
2002	713	477

Note that Brown 7 is projected to be used more than Brown 6. That is only because it comes first in the dispatch order in the production cost model. The hours of utilization will in actuality be more balanced between the two CTs.

- c. No. The CTs will be needed beyond 2002. Please refer to the attached response to AG-2 part (c).
- d. The desired strike price of \$150/MWH was derived from instruments quoted in the open market at the time of the RFP. The strike price was chosen such

ITEM NO. PSC-S10

PAGE 1 OF 4

WITNESS Bellar

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Public Service Commission's Order Dated April 9, 1999 - Data Request #2

that the responses would be comparable to similar call options available in the open market; this would permit comparison of the proposals to a market product on a like basis. At the time of the RFP, the most commonly quoted daily call option in the market (for July and August firm power delivered into Cinergy on a 5x16 basis with day-ahead execution) had a strike price of \$150/MWH.

ITEM NO. PSC-510  
PAGE 2 OF 4  
WITNESS Bellar

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Attorney General's 1st Data Request Dated April 1, 1999

Question: AG-2

Responding Witness: Lonnie E. Bellar

- Q-2. In the application on page 6, it is stated that the new CTs are expected to have an annual capacity factor of 3.4% to 5.3% for the next 5 years. With respect to these figures, please provide the following:
- a. Please provide the projected capacity factor for each of the two new CTs for each of the first 20 years of their use.
  - b. Please provide the projected capacity factors for KU and LG&E's existing units for the first 20 years of the new CTs' use.
  - c. For an average projected year, please provide the projected load factors for each month of the year.
- A-2.
- a. Please see the attached table.
  - b. Please see the attached table.
  - c. Please see the attached table.

ITEM NO. PSC-510  
PAGE 3 OF 4  
WITNESS Bellar

(a) Projected capacity factors for new ABB GT24A CTs

Company	Station	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
LGE	Cane Run 4	61.8%	57.4%	62.3%	57.9%	65.8%	54.8%	44.4%	50.7%	54.9%	53.9%	54.1%	61.1%	51.0%	64.0%	52.9%	60.0%	60.0%	66.5%	62.7%	63.1%	69.6%	
	Cane Run 5	60.2%	65.9%	54.2%	60.8%	66.5%	59.5%	60.4%	55.7%	52.1%	60.0%	62.1%	56.7%	59.8%	64.8%	64.8%	57.4%	64.3%	63.3%	63.7%	68.6%	62.3%	
	Cane Run 6	55.3%	54.4%	56.6%	53.8%	50.9%	54.9%	44.3%	50.5%	46.6%	49.7%	49.7%	52.9%	46.7%	52.8%	55.9%	52.6%	58.7%	54.6%	53.7%	60.7%	51.4%	
	Cane Run 11	0.1%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	
	Mt Creek 1	53.5%	53.2%	48.4%	61.2%	58.2%	54.4%	51.6%	52.3%	58.4%	52.1%	57.1%	65.6%	60.3%	63.3%	68.9%	63.4%	59.8%	59.8%	73.1%	67.9%	68.1%	72.1%
	Mt Creek 2	62.6%	43.5%	49.5%	49.5%	62.2%	51.6%	44.9%	53.5%	50.7%	50.7%	69.3%	76.1%	60.4%	67.8%	62.7%	64.9%	71.0%	61.5%	67.6%	67.6%	74.8%	69.4%
	Mt Creek 3	67.6%	65.7%	74.5%	62.8%	70.4%	74.3%	64.1%	67.9%	74.1%	74.1%	69.3%	76.1%	65.1%	70.7%	78.3%	72.5%	78.4%	78.0%	66.9%	66.9%	76.8%	78.6%
	Mt Creek 4	75.8%	65.8%	74.5%	69.4%	69.8%	74.1%	60.9%	69.9%	66.7%	71.3%	72.9%	69.7%	70.3%	77.0%	71.2%	78.4%	72.4%	72.4%	73.0%	78.8%	73.0%	80.0%
	Ohio Falls	48.8%	48.1%	47.7%	47.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%
	Paddys Run 11	0.3%	0.3%	0.6%	0.4%	0.2%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
Paddys Run 12	0.4%	0.2%	0.6%	0.2%	0.2%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	
Tremble County 1	81.0%	86.7%	81.2%	86.7%	74.3%	83.2%	90.6%	83.3%	83.3%	83.3%	78.9%	83.5%	86.0%	82.0%	84.0%	86.8%	89.1%	83.8%	86.1%	91.3%	76.9%	83.9%	
Waterside 7	0.1%	0.2%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	
Waterside 8	0.3%	0.3%	0.6%	0.2%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	
Zorn 1	0.2%	0.2%	0.5%	0.3%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
KU	Brown 1	13.6%	19.9%	23.4%	25.8%	30.6%	27.6%	32.0%	32.9%	37.9%	45.3%	44.0%	49.5%	48.7%	56.7%	51.1%	59.5%	60.7%	63.4%	63.8%	67.1%	68.1%	
	Brown 2	24.3%	32.2%	30.6%	39.1%	42.7%	43.6%	42.3%	45.9%	46.8%	48.6%	48.6%	55.1%	56.5%	59.7%	60.1%	56.4%	65.5%	66.1%	66.6%	69.2%	69.8%	
	Brown 3	41.5%	43.8%	45.7%	47.6%	49.5%	43.7%	47.5%	49.6%	50.1%	54.0%	53.0%	50.6%	56.8%	58.3%	59.7%	61.9%	62.7%	57.7%	64.2%	66.3%	67.8%	
	Brown 6	1.6%	1.8%	2.4%	2.5%	2.2%	1.3%	0.7%	0.5%	0.4%	0.4%	0.6%	0.1%	0.3%	0.3%	0.2%	0.1%	0.3%	0.2%	0.1%	0.5%	0.3%	
	Brown 9	1.2%	1.6%	2.3%	2.4%	1.4%	1.1%	0.5%	0.5%	0.5%	0.4%	0.4%	0.6%	0.1%	0.3%	0.2%	0.0%	0.2%	0.1%	0.4%	0.1%	0.3%	
	Brown 10	1.1%	1.1%	1.8%	1.8%	1.2%	0.6%	0.4%	0.4%	0.4%	0.4%	0.2%	0.5%	0.1%	0.2%	0.2%	0.0%	0.1%	0.2%	0.1%	0.4%	0.1%	
	Brown 11	0.6%	1.1%	1.4%	1.5%	1.0%	0.2%	0.1%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.0%	0.1%	0.0%	0.3%	0.1%	0.3%	
	Dk Dam	26.8%	26.8%	26.6%	26.7%	26.7%	26.8%	26.6%	26.7%	26.6%	26.6%	26.6%	26.7%	26.7%	26.5%	26.7%	26.7%	26.8%	26.7%	26.7%	26.7%	26.7%	26.7%
	Chent 1	85.4%	86.5%	77.5%	86.3%	86.3%	86.5%	86.3%	86.2%	86.2%	86.5%	86.5%	86.3%	86.3%	86.3%	86.5%	77.5%	86.3%	86.3%	86.5%	86.3%	86.3%	77.6%
	Chent 2	47.2%	53.9%	55.7%	59.1%	56.8%	52.3%	87.1%	87.6%	87.9%	88.8%	88.8%	89.3%	89.1%	89.1%	89.7%	89.5%	89.7%	80.4%	90.1%	89.8%	89.9%	90.0%
Chent 3	48.3%	57.2%	59.1%	64.8%	64.4%	55.3%	75.2%	75.5%	75.9%	75.9%	69.4%	76.1%	76.0%	76.8%	77.2%	77.0%	78.4%	80.4%	78.4%	78.9%	80.2%	79.9%	
Chent 4	53.3%	55.2%	63.6%	64.8%	66.4%	58.5%	74.9%	75.5%	75.9%	75.9%	69.4%	76.1%	76.0%	76.8%	77.2%	77.0%	78.4%	79.2%	78.4%	78.9%	80.2%	79.9%	
Green River 1	10.4%	11.6%	13.2%	16.0%	18.7%	15.4%	17.2%	20.6%	15.3%	19.7%	18.6%	18.6%	20.3%	25.7%	26.8%	28.1%	21.9%	27.9%	28.2%	29.9%	29.6%	30.1%	
Green River 2	11.2%	12.0%	13.5%	16.5%	15.3%	15.4%	17.2%	20.6%	15.3%	19.7%	18.6%	18.6%	20.3%	25.7%	26.8%	28.1%	21.9%	27.9%	28.2%	29.9%	29.6%	30.1%	
Green River 3	23.3%	26.5%	26.9%	25.0%	33.3%	29.7%	34.4%	36.2%	36.8%	38.4%	20.8%	15.5%	24.1%	24.4%	23.1%	27.6%	27.1%	26.8%	27.4%	27.8%	28.8%	28.8%	
Green River 4	30.0%	31.7%	33.3%	37.2%	34.9%	34.9%	34.9%	38.7%	41.3%	39.4%	45.1%	39.4%	46.8%	47.1%	54.5%	52.5%	49.5%	57.0%	57.5%	61.1%	63.8%	66.1%	
Hawling	0.3%	0.3%	0.8%	0.7%	0.2%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	
Lock 7	42.7%	45.7%	45.5%	45.8%	45.7%	45.8%	45.8%	45.9%	45.9%	45.8%	45.8%	45.8%	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	46.2%	
Preville 3	18.0%	18.7%	22.2%	22.7%	24.4%	24.6%	29.5%	33.3%	35.5%	41.7%	43.0%	46.1%	46.2%	46.2%	45.3%	52.5%	52.3%	52.7%	52.1%	52.3%	52.7%	52.6%	
Tyrone 1	1.2%	1.4%	1.8%	1.5%	0.5%	0.2%	0.2%	0.2%	0.1%	0.1%	0.0%	0.3%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%	
Tyrone 2	0.7%	0.7%	1.6%	1.1%	0.4%	0.2%	0.2%	0.2%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%	
Tyrone 3	9.7%	11.5%	14.2%	15.1%	18.4%	16.9%	19.1%	21.6%	23.1%	31.2%	33.0%	36.7%	36.3%	42.7%	43.3%	47.3%	49.8%	44.9%	53.0%	53.0%	56.0%	58.4%	

(b) LG&E and KU existing unit projected capacity factors with new ABB GT24A CTs

Company	Station	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
LGE	Cane Run 4	61.8%	57.4%	62.3%	57.9%	65.8%	54.8%	44.4%	50.7%	54.9%	53.9%	54.1%	61.1%	51.0%	64.0%	52.9%	60.0%	60.0%	66.5%	62.7%	63.1%	69.6%	
	Cane Run 5	60.2%	65.9%	54.2%	60.8%	66.5%	59.5%	60.4%	55.7%	52.1%	60.0%	62.1%	56.7%	59.8%	64.8%	64.8%	57.4%	64.3%	63.3%	63.7%	68.6%	62.3%	
	Cane Run 6	55.3%	54.4%	56.6%	53.8%	50.9%	54.9%	44.3%	50.5%	46.6%	49.7%	49.7%	52.9%	46.7%	52.8%	55.9%	52.6%	58.7%	54.6%	53.7%	60.7%	51.4%	
	Cane Run 11	0.1%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	
	Mt Creek 1	53.5%	53.2%	48.4%	61.2%	58.2%	54.4%	51.6%	52.3%	58.4%	52.1%	57.1%	65.6%	60.3%	63.3%	68.9%	63.4%	59.8%	59.8%	73.1%	67.9%	68.1%	72.1%
	Mt Creek 2	62.6%	43.5%	49.5%	49.5%	62.2%	51.6%	44.9%	53.5%	50.7%	50.7%	69.3%	76.1%	60.4%	67.8%	62.7%	64.9%	71.0%	61.5%	67.6%	67.6%	74.8%	69.4%
	Mt Creek 3	67.6%	65.7%	74.5%	62.8%	70.4%	74.3%	64.1%	67.9%	74.1%	74.1%	69.3%	76.1%	65.1%	70.7%	78.3%	72.5%	78.4%	78.0%	66.9%	66.9%	76.8%	78.6%
	Mt Creek 4	75.8%	65.8%	74.5%	69.4%	69.8%	74.1%	60.9%	69.9%	66.7%	71.3%	72.9%	69.7%	70.3%	77.0%	71.2%	78.4%	72.4%	72.4%	73.0%	78.8%	73.0%	80.0%
	Ohio Falls	48.8%	48.1%	47.7%	47.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%	56.8%	56.7%	56.7%	56.7%
	Paddys Run 11	0.3%	0.3%	0.6%	0.4%	0.2%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	
Paddys Run 12	0.4%	0.2%	0.6%	0.2%	0.2%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%		
Tremble County 1	81.0%	86.7%	81.2%	86.7%	74.3%	83.2%	90.6%	83.3%	83.3%	83.3%	78.9%	83.5%	86.0%	82.0%	84.0%	86.8%	89.1%	83.8%	86.1%	91.3%	76.9%	83.9%	
Waterside 7	0.1%	0.2%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	
Waterside 8	0.3%	0.3%	0.6%	0.2%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	
Zorn 1	0.2%	0.2%	0.5%	0.3%	0.1%	0.0%	0.1%	0.1%															

**CASE**

**NUMBER:**

09-056

COMMONWEALTH OF KENTUCKY  
PUBLIC SERVICE COMMISSION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

IN THE MATTER OF:

APPLICATION OF LOUISVILLE GAS AND  
ELECTRIC COMPANY AND KENTUCKY  
UTILITIES COMPANY FOR A CERTIFICATE  
OF CONVENIENCE AND NECESSITY FOR  
THE ACQUISITION OF TWO 164 MEGAWATT  
COMBUSTION TURBINES

CASE NO. 99-056

**FILED**

JUN 15 1999

PUBLIC SERVICE  
COMMISSION

TRANSCRIPT OF EVIDENCE

DATE OF HEARING: JUNE 1, 1999

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

APPEARANCES

HON. PAUL SHAPIRO, HEARING OFFICER

HON. RICHARD RAFF, COUNSEL FOR COMMISSION STAFF

FOR LOUISVILLE GAS AND ELECTRIC COMPANY  
AND KENTUCKY UTILITIES COMPANY:

HON. KENDRICK RIGGS  
HON. LAUREN ANDERSON  
OGDEN, NEWELL & WELCH  
1700 CITIZENS PLAZA  
500 WEST JEFFERSON STREET  
LOUISVILLE, KENTUCKY 40202

HON. MICHAEL BEER  
LOUISVILLE GAS AND ELECTRIC COMPANY  
220 WEST MAIN STREET  
P. O. BOX 32010  
LOUISVILLE, KENTUCKY 40232

FOR ATTORNEY GENERAL'S OFFICE:  
HON. ELIZABETH E. BLACKFORD  
ASSISTANT ATTORNEY GENERAL  
1024 CAPITAL CENTER DRIVE  
FRANKFORT, KENTUCKY 40601

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

I N D E X

PAGE NO.

Appearances	2
Discussion	4-8
RONALD L. WILLHITE	
Direct Examination by Mr. Riggs	8-10
Cross Examination by Ms. Blackford	10-15
Cross Examination by Mr. Raff	15-25
H. BRUCE SAUER	
Direct Examination by Mr. Riggs	26-28
Cross Examination by Mr. Raff	28-31
JAMES W. KASEY	
Direct Examination by Mr. Riggs	32-33
Cross Examination by Ms. Blackford	34-40
Cross Examination by Mr. Raff	41-42
LONNIE E. BELLAR	
Direct Examination by Mr. Riggs	43-47
Cross Examination by Ms. Blackford	48-57
Cross Examination by Mr. Raff	58
Confidential Cross Examination by Mr. Raff	
Contained in Separate Transcript Consisting of	
28 Pages	
Discussion	59-62
MICHAEL ROBINSON	
Examination by Hearing Officer Shapiro	62
Cross Examination by Mr. Raff	63-70
DAVID H. BROWN KINLOCH	
Direct Examination by Ms. Blackford	71-72
Cross Examination by Mr. Riggs	72-90
Cross Examination by Mr. Raff	90-92
Recross Examination by Mr. Riggs	93
Discussion	94-98
Reporter's Certificate	99

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

This is a hearing before the Kentucky Public Service Commission in the matter of the application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the acquisition of two 164 megawatt combustion turbines. It's Docket No. 99-056. Are the applicants, Louisville Gas and Electric Company and Kentucky Utilities, ready to proceed?

MR. RIGGS:

We are, Your Honor.

HEARING OFFICER SHAPIRO:

And we have two intervenors here in this case. One is the Attorney General of Kentucky. Are you ready to proceed?

MS. BLACKFORD:

Yes, Your Honor.

HEARING OFFICER SHAPIRO:

And I don't believe Kentucky Industrial Utility Consumers are here today; is that correct?

MR. RIGGS:

That's correct. They're not present in the room, Your Honor.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

And is Commission staff ready to proceed?

MR. RAFF:

Yes, Your Honor.

HEARING OFFICER SHAPIRO:

Let me have appearance of counsel, first, for the applicants.

MR. RIGGS:

Thank you, Your Honor. For the applicants, Louisville Gas and Electric Company and Kentucky Utilities Company, Kendrick Riggs and Lauren Anderson with the firm of Ogden, Newell & Welch, Louisville, Kentucky, and Mr. Mike Beer, in-house counsel for Louisville Gas and Electric Company.

HEARING OFFICER SHAPIRO:

How do you spell the last name of Mr. Beer?

MR. RIGGS:

B-e-e-r.

HEARING OFFICER SHAPIRO:

Is it Michael?

MR. RIGGS:

Michael or Mike.

HEARING OFFICER SHAPIRO:

And for the Attorney General?

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MS. BLACKFORD:

Elizabeth Blackford, 1024 Capital Center Drive,  
Frankfort.

HEARING OFFICER SHAPIRO:

And for the Commission staff?

MR. RAFF:

Richard Raff.

HEARING OFFICER SHAPIRO:

Are there any preliminary matters that need to be  
addressed at this time?

MR. RIGGS:

Yes, Your Honor, there are two housekeeping matters I  
would like to address at this time. First, Your Honor,  
I have with me the certificate of proof of notice of  
this hearing. I would like to ask that this be entered  
into the record and admitted as Applicants Exhibit 1.

HEARING OFFICER SHAPIRO:

Any objection?

MR. RAFF:

No.

HEARING OFFICER SHAPIRO:

So ordered.

APPLICANTS EXHIBIT 1

MR. RIGGS:

Thank you, Your Honor. The second matter, Your Honor,

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

concerns the motion made by the joint applicants on April 1 for leave to amend their application and revise their testimony. That was done in connection with the Commission Order requesting information from the companies and that motion has not been acted upon by the Commission, and I would ask that the Examiner grant the motion.

HEARING OFFICER SHAPIRO:

Is there any objection to the motion, Ms. Blackford?

MS. BLACKFORD:

No.

HEARING OFFICER SHAPIRO:

So ordered.

MR. RIGGS:

Thank you, Your Honor.

HEARING OFFICER SHAPIRO:

Okay. Do you want to call your first witness?

MR. RIGGS:

Yes, Your Honor, if you please. Our witnesses today are Mr. Ronald L. Willhite, Vice President of Regulatory Affairs for LG&E and KU; Mr. H. Bruce Sauer, Manager of Forecasting and Marketing Analysis for LG&E and KU; Mr. James W. Kasey, former Senior Vice President of LG&E Marketing, Inc.; and Mr. Lonnie E. Bellar, Manager of Generation Systems Planning for LG&E

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

and KU. In addition, we have present in the Hearing Room this morning Mr. Mike Robinson, Controller, and Ms. Caryl M. Pfeiffer, Director of Environmental Affairs. They are available for any questions concerning the information filed in response to their Requests for Information. The company calls Mr. Willhite.

HEARING OFFICER SHAPIRO:

Mr. Willhite, do you want to come around, please?

WITNESS SWORN

The witness, RONALD L. WILLHITE, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. RIGGS:

Q. Please state your name and business address.

A. Ronald L. Willhite, 220 West Main Street, Louisville, Kentucky 40202.

Q. Did you cause to be prepared and filed with the Commission on February 11 an Application of eight pages and five Exhibits and testimony consisting of 14 pages and an appendix marked "A"?

A. Yes, I did.

Q. In connection with a Request for Information from the Commission, did you cause to be prepared and filed with the Commission on April 1 an Amended Application

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

amending Paragraph No. 6 entitled "Permits from Public Authorities" and revised testimony consisting of one page that revises Lines 13 through 24 on Page 12 of your original testimony and Lines 1 through 3 of Page 13 of your original testimony . . .

A. Yes.

Q. . . . filed on February 11?

A. Yes, I did.

Q. Does the Application as amended request the relief sought by the companies in this case?

A. Yes, it does.

Q. Subject to the revisions in your testimony, do you affirm and adopt your testimony today?

A. Yes, I do.

Q. Would you briefly state what action the Commission should take on the joint application of LG&E and KU in this case?

HEARING OFFICER SHAPIRO:

Well, wait a minute. What was the question?

MR. RIGGS:

Pardon?

HEARING OFFICER SHAPIRO:

What was the question?

MR. RIGGS:

I said, "Could you briefly state what action the

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

Commission should take on the joint application of  
LG&E and KU in this case?"

HEARING OFFICER SHAPIRO:

Well, isn't that in the prefiled testimony?

MR. RIGGS:

Yes, it is.

HEARING OFFICER SHAPIRO:

Well, we don't need that again.

MR. RIGGS:

I'll withdraw that, and Mr. Willhite is available  
for questions, Your Honor.

HEARING OFFICER SHAPIRO:

Okay. Ms. Blackford?

CROSS EXAMINATION

BY MS. BLACKFORD:

Q. Good morning, Mr. Willhite.

A. Good morning.

Q. In Response to the Attorney General's Request, Item 13,  
you stated that, in your testimony at Page 11 where you  
say that the price of a combustion turbine is expected  
to continue to rise, about that statement, you say that  
it is general in nature. Can you please give me the  
basis for your statement?

A. Well, we find ourselves today in a seller's market as  
compared to a buyer's market that we had experienced in

1 the past. Given the pressures brought about by the  
2 seller's market and the principles of supply and  
3 demand, it was my expectation that, until this problem  
4 with the seller's market was relieved, that we would  
5 continue to see upward pressure on the prices of  
6 capacity.

7 Q. What is the duration of the market that you would  
8 expect? What is the duration in the seller's market?

9 A. I think it's going to be difficult to know for certain,  
10 but it certainly is not going to disappear in the near  
11 term.

12 Q. What do you consider to be the near term?

13 A. This summer and maybe even next. If you'll notice in  
14 the trade press, many companies are out procuring or  
15 attempting to procure combustion turbines, and they're  
16 having great difficulty in doing that and particularly  
17 for this summer, which is almost unheard of, and then  
18 even the year 2000 and 2001.

19 Q. And so the crunch is expected to last through 2000-2001  
20 is what you're saying?

21 A. That is my expectation; yes.

22 Q. And, during that period, I presume that every  
23 combustion turbine available will be placed into  
24 service essentially. Will that diminish the crunch?  
25 Have you any idea how many are out there available to

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

be placed?

A. I haven't made any analysis of that. Our Planning personnel, Mr. Bellar, would be more knowledgeable about the availability of capacity. What I've taken note of is what's been reported in the trade press and what appears to me to be a very difficult situation in availability of combustion turbines to meet the growing loads that we're experiencing. Particularly here in the Commonwealth and in the service territory of KU and LG&E, we are experiencing significant growth in our loads, and we see that across all sectors, and so it's a matter of when there becomes a matching of the supply and demand.

Q. And you don't really have any idea when those two will match?

A. I don't.

Q. Or when the market would change?

A. I don't have any precise time frame, because I have not made such a study. I think Mr. Bellar and Mr. Kasey, both, who deal in matters like this on a day-to-day basis, could be more informative to you.

Q. All right. Thank you. In the Attorney General's Information Request, Item 10, you were asked the results of your RFP to determine the present cost of combustion turbines and to see if you are correct that

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

the cost of combustion turbines have continued to rise since you bought the ones at issue in this particular hearing. You gave the response that that information was confidential. Without violating that confidentiality, can you tell me, in general and without getting into specifics of any bid, whether that price is higher than or lower than the \$280 per kilowatt that you paid for the two units in this case?

A. Would you repeat the AG Request number?

Q. Sure. Item 10.

A. Item 10. I don't have Item 10 with me.

MR. RIGGS:

Mr. Bellar is the witness for that Response.

MS. BLACKFORD:

I'm sorry?

MR. RIGGS:

Mr. Bellar is the witness for that Response.

MS. BLACKFORD:

I'll address it to him, then.

Q. I am correct that LG&E Capital needed to get EWG status in order to operate these CTs before any certificate issues in this case; is that correct, if a certificate does not issue or before one issues in this case?

A. Well, it's a matter that, for LG&E Capital to operate the units, they would have to have EWG status, which

1 has been obtained.

2 Q. It has been obtained?

3 A. That's correct.

4 Q. Do you have any quantification of the cost of obtaining

5 that status?

6 A. I do not; no. It would have involved the filing with

7 the Federal Energy Regulatory Commission, and so it

8 would involve the amount of legal effort that would

9 have been required to develop and submit that filing to

10 the FERC.

11 Q. If a certificate issues in this case and the CTs are

12 transferred to KU and LG&E, will that cost be passed

13 along as a part of the cost of these CTs?

14 A. My understanding is that it would be. It's a cost

15 incurred with making available these CTs for the

16 benefit of our Kentucky consumers.

17 Q. If you would follow a standard or heretofore standard

18 procedure of getting a certificate in advance of

19 purchasing the CTs, there would be no such cost; is

20 that correct?

21 A. I would agree with that; yes.

22 Q. Did you assist Mr. Bellar in putting together the

23 projections of power prices found in the Resource

24 Assessment that is in Exhibit LEB-2?

25 A. No, ma'am.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MS. BLACKFORD:

I skipped right into the next witness. I'm sorry.

A. Okay.

MS. BLACKFORD:

Thank you. That's all of my questions.

A. All right.

HEARING OFFICER SHAPIRO:

Mr. Raff?

CROSS EXAMINATION

BY MR. RAFF:

Q. Good morning, Mr. Willhite.

A. Good morning.

Q. Would you turn to your Response to the Commission's April 9, 1999, Order, Item 1c., please?

MS. BLACKFORD:

Mr. Raff, would you repeat that, please?

MR. RAFF:

April 9 Order, Item 1c.

A. Yes, I have it.

Q. In this Response, you state LG&E Capital Corp. is not being subsidized by KU at this time because LG&E Capital Corp. owns and is constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for a Certificate of Convenience and Necessity and a Certificate of Environmental Compatibility. Do

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

you see that?

A. Yes.

Q. Can you explain what you mean when you said, ". . . is constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for those certificates"?

A. Pursuant to KRS 278.020, the company recognizes that it could not begin construction, the companies being LG&E and KU, could not begin construction of combustion turbines without approval of this Commission.

Therefore LG&E Capital is undertaking that construction, and our request in this case is for the two utilities, LG&E and KU, to acquire ownership of the combustion turbines once the certificates, in this case, are granted by the Commission.

Q. Could you turn, please, to your Response to the Commission's March 16 and March 19 Orders, Item 1?

A. Okay.

Q. You indicated that LG&E Energy Corp. had directed LG&E Capital Corp. to enter into an Option Agreement with ABB for the acquisition of the combustion turbines in order to prevent the loss of the acquisition opportunity. Can you tell me whether, during the time frame of August and September of 1998, LG&E or KU had any discussions with ABB regarding the possibility of entering into an Option Agreement for the combustion

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

turbines with the contingency that regulatory approvals would be needed before a final acquisition could be accomplished?

A. Mr. Raff, I was not involved in any of the discussions with ABB. My understanding is, though, that these turbines would not have been available had that type of contingency been placed on their acquisition.

Q. Do you know who was directly involved in those discussions?

A. Mr. Lucas would have been involved and other members of his staff.

Q. If LG&E, and by that I mean the LG&E Energy Corp., had not had an unregulated affiliate which was able to sign a contract with ABB, would LG&E and KU have pursued an agreement with ABB that included a regulatory out?

A. I don't believe it's a question of whether or not the utilities would have had the desire to pursue such an agreement. It's whether or not such an agreement could be consummated given the need for these combustion turbines and the fact that other utilities in the country would have had an interest in procuring them as well.

Q. During the August/September 1998 time frame, was LG&E's and KU's internal analysis developed in sufficient detail to have supported a Certificate of Convenience

- 1 and Necessity application here at the Commission?
- 2 A. Mr. Bellar can speak more to the details of the
- 3 analysis. My understanding is that, in that time frame
- 4 of August and September, the utilities had made a
- 5 preliminary analysis that indicated that the turbines
- 6 would possibly be a viable option, but the analysis had
- 7 not been done in the detail that was ultimately
- 8 submitted to the Commission with our application on
- 9 February 11 of 1999.
- 10 Q. Were the individuals who prepared that preliminary
- 11 analysis in the August/September time frame the same
- 12 individuals who prepared the LG&E Energy Corp. analysis
- 13 in September?
- 14 A. I do not know. Mr. Bellar may be able to answer that.
- 15 Q. I assume that that preliminary analysis was done as a
- 16 result of someone becoming aware of the fact that there
- 17 were these two combustion turbines that could be
- 18 obtained at that point in time; is that true?
- 19 A. I would agree that that was the case. I mean, we're in
- 20 our planning process of evaluating our capacity
- 21 situation, and we're coming out of a period where we
- 22 have been supplying part of that need via purchased
- 23 power agreements. On top of that prior need comes the
- 24 150 megawatts of load growth that the companies are
- 25 experiencing in total each year. So, during that time

1 frame, our Planning folks would have been looking at  
2 our needs and reviewing how we could put in place  
3 resources to satisfy those needs.

4 Q. Well, had these two turbines not become available at  
5 that point in time, what were your preexisting plans  
6 for meeting this 1999 summer load?

7 A. We would have had in place the physical assets that  
8 have been in place for some time, the baseload units,  
9 the CTs at the Brown plant and the other CTS at I  
10 believe it's Cane Run and at Haepling on the KU system.  
11 We have certain purchased power arrangements that each  
12 company has with certain suppliers, and then we had the  
13 need of this load growth and the need to replace  
14 expired purchased power arrangements that had been in  
15 place during this period of the nineties. As you  
16 recall, we've been before the Commission, particularly  
17 KU, with requests similar to this to construct  
18 combustion turbines. That has continued to be the  
19 physical asset that satisfies what is the current  
20 expectation, but we're always in the analysis situation  
21 of buy versus build, and, when the situation has been  
22 in a buyer's market rather than a seller's market that  
23 we're in today, in recent years, we have been able to  
24 purchase peaking type capacity in lieu of installing  
25 other physical assets. We've had agreements with

1           Cinergy and Virginia Power and Enron and other folks  
2           during this period of time to satisfy this amount of  
3           power that we've required. So it's at this time frame  
4           we needed to replace those contracts as well as meet  
5           the increased demand that we're facing each year.

6    Q.     So you're saying that, had these two combustion  
7           turbines not become available when they did, that you  
8           would have either renewed or entered into new purchased  
9           power contracts for the 1999 summer?

10   A.     It's my understanding we would have been - that would  
11           have been our - what we would have been faced with in  
12           order to meet the need would be to acquire purchased  
13           power.

14   Q.     Okay. In your Response to the Commission's March 16  
15           and March 19 Order, Item 5, Pages 2 through 4, . . .

16   A.     I'm sorry. I'm not - March 16 and 19?

17   Q.     Yes.

18   A.     And Item . . .

19   Q.     Item 5, Pages 2 through 4.

20   A.     Okay. You're talking about the attachment. I'm sorry.

21   Q.     Would you agree that Paragraph 2 on Page 2 and  
22           Paragraph 3 on Page 3 imply that LG&E and KU had not  
23           yet determined as of the October 30, 1998, letter that  
24           the two combustion turbines were the best resource  
25           option for their reserve margin needs?

1 A. Would you give me those two paragraphs again?  
2 Q. Sure. Paragraph 2 on Page 2.  
3 A. Which is the first page of the letter?  
4 Q. Yes.  
5 A. Okay.  
6 Q. And Paragraph 3 on Page 3. Would you like me to repeat  
7 the question or do you . . .  
8 A. No. I think I remember; yes. As I stated earlier, the  
9 two utilities had done what was a very preliminary  
10 analysis of the feasibility of the combustion turbines  
11 and had not yet completed the detail analysis that was  
12 submitted with our application on February 11, 1999.  
13 Q. Would you also agree, based on your Response to Item 1  
14 in that same package, that LG&E and KU had, at least on  
15 a preliminary basis, decided the two combustion  
16 turbines were the best resource option back in August  
17 of 1998?  
18 A. Yes.  
19 Q. Back to Item 5, the October 30 letter, Page 3 of 4, ...  
20 A. Okay.  
21 Q. . . . and the second paragraph, you state that LG&E or  
22 KU involvement in the project will be limited to  
23 providing oversight during the construction and  
24 installation phases, and it will be performed pursuant  
25 to a service agreement. Was such a service agreement

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

ever drafted?

A. No, it was not. After having reviewed the services that were being provided and having taken note of the procedures that are in place with regard to the corporate policies and guidelines for intercompany transactions and our system of tracking costs, we did not see the need to enter into a service agreement for the construction phase.

Q. All right. Could you turn to your Response to Item - yeah, if you would turn to Response to Item 18d., please, Page 2 of 2, . . .

A. I don't have Item 18 with me.

MR. RIGGS:

That's a Response of Mr. Robinson. Let me hand it to Mr. Willhite.

MR. RAFF:

Yeah, we realize it was another witness, but Mr. Willhite should be able to answer the question.

Q. As we just discussed, your October 30 letter talked about the involvement of LG&E and KU being limited to providing oversight during construction and the installation phase. Do you recall that?

A. Yes.

Q. Would you agree that, based on the Response here, those costs, that those go beyond a mere oversight role for

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

KU personnel?

A. Yes, I would agree with that, because I think, as we got into the project and got into the actual managing of the project, there became some other ways in which for us to economize in terms of the construction of the facilities and what I'm thinking of, in particular, is that some of our substation folks have actually handled some of the work connecting the system back to the generators. I think, back in October, when we sent the letter to the Commission, we obviously were in an early stage in our consideration and our implementation of the actual construction. So, as we have worked through the process, we have obviously had to adjust.

Q. Between your October 30, 1998, letter and the filing of the application on February 11, was there any written contact with the Commission informing them of any changes in the scope of the work as outlined in your letter for the LG&E or KU personnel?

A. No, there was not, but, Mr. Raff, we would view our operation under the corporate guidelines where the services are provided between the two regulated utilities as well as the regulated utilities and the LG&E Energy Corporation. Those kind of transactions transpire almost on a daily basis, and we prepare and submit filings to the Commission of those transactions.

1 Q. In your Response to the Commission's April 9, 1999,  
2 Order, Items 1 and 5, you state that LG&E Capital Corp.  
3 is not being subsidized by KU?  
4 A. Correct.  
5 Q. Given the financial arrangements currently in place for  
6 the combustion turbine project, is LG&E Capital Corp.  
7 subsidizing KU or LG&E?  
8 A. At this time, I can't think of a way in which they  
9 would be. When the Commission approves our request,  
10 LG&E Capital Corp. will be reimbursed for their costs  
11 incurred in purchasing and putting in place the  
12 combustion turbines up to the point in time when the  
13 transaction occurs.  
14 Q. Do you know the date that the FERC issued its Order  
15 granting EWG status for the LG&E Capital Corp.?  
16 A. I do not, Mr. Raff. I did not bring that Order with  
17 me, but we certainly can . . .  
18 Q. If you could maybe . . .  
19 A. . . . provide it to you by this afternoon because . . .  
20 Q. . . . provide a copy of the - if it was an Order or a  
21 letter.  
22 A. Yes. Yes, we could do that and maybe - well, we could  
23 provide you the letter or Order; yes.  
24 Q. And do you know the current status of the request to  
25 sell power at market-based rates? Do you know if that

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

was granted, too?

A. It's my understanding that it has been.

Q. And a copy of that Order if it's not in the same Order as the . . .

A. Okay.

Q. . . . EWG status?

A. Yeah, they were different applications.

MR. RAFF:

Thank you, Mr. Willhite. No further questions.

HEARING OFFICER SHAPIRO:

Any redirect?

MR. RIGGS:

None, Your Honor.

HEARING OFFICER SHAPIRO:

Thank you, Mr. Willhite.

MR. RIGGS:

The company calls Mr. Sauer, please.

WITNESS SWORN

1                   The witness, H. BRUCE SAUER, after having been  
2 first duly sworn, testified as follows:

3   DIRECT EXAMINATION

4 BY MR. RIGGS:

5 Q.    Would you please state your name and business address?

6 A.    H. Bruce Sauer. My business address is 220 West Main  
7 Street, Louisville, Kentucky 40202.

8 Q.    Mr. Sauer, did you cause to be prepared and filed with  
9 the Commission, on February 11, 1999, written testimony  
10 consisting of five pages and three Exhibits?

11 A.    I did.

12 Q.    Do you have any corrections to your testimony?

13 A.    I do. I have two corrections to enter into the record,  
14 both of which affect Table 3 on Page 4 of Exhibit HBS-  
15 2, and one correction that affects Table 8 on Page 9 of  
16 Exhibit HBS-2. The first correction is at each of the  
17 forecasted summer . . .

18 MR. RAFF:

19                   I'm sorry. I'm sorry. Which Exhibit are we on,  
20 first?

21 A.    Table 3, Page 4, on Exhibit HBS-2.

22 HEARING OFFICER SHAPIRO:

23                   Okay. Let's give everybody a chance to get to  
24 that. Table 3, Exhibit . . .

25 A.    Page 4, Exhibit HBS-2.

1 HEARING OFFICER SHAPIRO:

2 At Table 3, you said?

3 A. Table 3, yes. Okay. The first correction is that each  
4 of the forecasted summer peak demands for LG&E, as  
5 shown on Table 3, should be increased by seven  
6 megawatts due to my use of a preliminary forecast when  
7 creating that table, and any numerical references to  
8 the LG&E forecasted peak in the paragraph below Table 3  
9 should also be increased by seven megawatts.

10 HEARING OFFICER SHAPIRO:

11 Could you go through that again?

12 A. Sure. Every number in the Table 3 should be increased  
13 by seven megawatts.

14 HEARING OFFICER SHAPIRO:

15 That's both the summer peak and the growth - well,  
16 just the summer peak?

17 A. No, sir, just the megawatt values.

18 Q. Please proceed.

19 A. Okay. The second correction involves the growth rate  
20 for 1999 that is shown in both Table 3, which is where  
21 you are, and also on Table 8 of the Exhibit HBS-2. In  
22 each of those cases, I used preliminary estimates for  
23 the 1998 summer peak, and, on correction, those growth  
24 rates should show .7 percent for the LG&E value in  
25 Table 3 and 1.25 percent in Table 8.

1 Q. Subject to these corrections, do you affirm and adopt  
2 your testimony today?

3 A. Yes, I do.

4 MR. RIGGS:

5 I understand the Examiner's preference would be  
6 for no summaries of the testimony; is that  
7 correct?

8 HEARING OFFICER SHAPIRO:

9 Right.

10 MR. RIGGS:

11 Mr. Sauer is now available for any questions.

12 HEARING OFFICER SHAPIRO:

13 Okay. Ms. Blackford?

14 MS. BLACKFORD:

15 I have no questions. Thank you.

16 HEARING OFFICER SHAPIRO:

17 No questions. Mr. Raff?

18 CROSS EXAMINATION

19 BY MR. RAFF:

20 Q. Maybe a clarification, Mr. Sauer. Are you saying that  
21 the Table 3, the growth rate, rather than being 4.57  
22 percent, should be .7 percent.

23 A. Point seven percent, yes.

24 Q. And, again, the reason for this what would appear to  
25 be . . .

- 1 A. Well, the reason is that the table presents forecasted  
2 demands that are after interruptible load, and they  
3 are, of course, developed on a weather normalized  
4 basis. So, there's two components to the 1998 value;  
5 one is what is the weather normalized value for '98,  
6 and the other is what is the estimated interruptible  
7 load that has to be taken out of the 1998 value. In  
8 both cases, I had preliminary estimates of those, and I  
9 had to revise them.
- 10 Q. Does that not affect subsequent years' growth rates?
- 11 A. No, sir, I don't believe it does. It's just correcting  
12 1998 actuals where they came in. The forecast, as it  
13 stands, is not affected by that.
- 14 Q. Well, if your 1999 growth rate is only .7 percent, why  
15 in the year 2000 would it be 3.37 percent?
- 16 A. Well, the 2000 figure . . .
- 17 Q. That's almost, what, five times?
- 18 A. Yeah. The 2000 figure is affected by the loss of about  
19 30 megawatts of interruptible load to the company, to  
20 LG&E. So that increases the summer peak more than  
21 would otherwise be the case and '98 came in higher,  
22 weather normalized higher, than we had expected it to.  
23 So that narrows the difference between 1998 and 1999.
- 24 Q. Why will there be a loss of 30 megawatts of inter-  
25 ruptible load?

1 A. One of the customers that's on an interruptible  
2 contract is dropping.  
3 Q. Who is that?  
4 A. I think it is Ford, but I would have to double-check on  
5 that.  
6 Q. And do you know why they're dropping the interruptible?  
7 A. No, sir, I don't.  
8 Q. I'm sorry. I didn't hear you.  
9 A. I said, "No, sir, I don't."  
10 Q. Is the company not projecting any additional inter-  
11 ruptible load to replace the Ford load?  
12 A. Not to replace the Ford load. There's 93 megawatts of  
13 interruptible load that is assumed throughout the  
14 forecast. There's 123 that's built into the 1999  
15 estimate and 93 for every year thereafter. That's just  
16 for the LG&E system.  
17 Q. Do you know how aggressively LG&E and KU try to market  
18 their interruptible load?  
19 A. No, sir, I don't.  
20 Q. Is it something you think ought to be aggressively  
21 marketed?  
22 A. My responsibility is to develop a baseline forecast,  
23 sir. I can't speak to that.  
24 Q. Well, as part of your duties, do you tell people that  
25 the more interruptible load they have the lower the

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

baseline projections would be?

A. I think that that's understood by the Planning staff. Again, I just have to take what's under contract and build it into my forecast.

Q. And, again, this 30 megawatts of the loss of interruptible, is that 30 megawatts that the company is just losing, period, or is it going from interruptible to firm?

A. It's, in effect, going from interruptible to firm. That's what's happening.

Q. Okay. And this table is just LG&E; correct?

A. That's correct.

Q. And then the correction that you made to Table 8, does that merely reflect the carry through of that correction to the combined growth rate, or is there something else that . . .

A. On the growth rate, you know, the correction carries forward for both of those tables because of the 1998 correction, but the megawatt values shown in Table 8 are correct. They were correct all along.

Q. But there's no change in the KU growth rate for 1999?

A. No. This was an LG&E correction only.

MR. RAFF:

Okay. Thank you, Mr. Sauer, no other questions.

A. Thank you.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Any redirect?

MR. RIGGS:

None, Your Honor. Thank you.

HEARING OFFICER SHAPIRO:

Thank you, Mr. Sauer.

MR. RIGGS:

The company will call Mr. James Kasey.

HEARING OFFICER SHAPIRO:

Okay. Mr. Kasey, do you want to come around,  
please?

WITNESS SWORN

The witness, JAMES W. KASEY, after having been  
first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. RIGGS:

Q. Would you please state your name and current business  
address?

A. My name is James W. Kasey. I'm at 3650 National City  
Tower, 101 South Fifth Street, Louisville, Kentucky.

Q. Mr. Kasey, did you cause to be prepared and filed with  
the Commission, on February 11, 1999, written testimony  
consisting of eight pages and an appendix marked "A"?

A. I did.

Q. Since then, have you changed employment?

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

A. I have. Upon my retirement from LG&E on February 6, 1999, I joined The ERORA Group as a principal participant. The ERORA Group is an energy advisory service and distributed generation development organization, and, as of this time, I am providing services to LG&E/KU in this case.

Q. Are the current option prices for power significantly different than those used in the Resource Assessment mentioned in your testimony?

A. They are not.

Q. Subject to your comments, do you adopt and affirm your testimony today?

A. I do.

MR. RIGGS:

Your Honor, I ask that Mr. Kasey's testimony and the testimony of Mr. Willhite and Mr. Sauer be admitted into evidence.

HEARING OFFICER SHAPIRO:

So ordered.

MR. RIGGS:

Mr. Kasey is now available for any questions.

HEARING OFFICER SHAPIRO:

Ms. Blackford?

CROSS EXAMINATION

1  
2 BY MS. BLACKFORD:

3 Q. Good morning, Mr. Kasey.

4 A. Good morning.

5 Q. Did you assist Mr. Bellar in putting together the  
6 projections of power prices found in the Resource  
7 Assessment, Exhibit LEB-2, Appendix A, 5 of 10?

8 A. We did; yes.

9 Q. In that assessment, prices appear to go up over time in  
10 almost every year, including the early years that are  
11 forecasted; am I correct about that?

12 A. They go up in the early years, and then they decline in  
13 the latter years, is my recollection of those numbers.

14 Q. In your Response to the Attorney General Information  
15 Request, Item 16 - do you have that before you?

16 A. I can get that. I do.

17 Q. Well, first - I'm sorry - let me hark back to that  
18 Appendix A. Would you please tell me where the prices  
19 start to go down in later years?

20 A. I believe that, from my recollection and I'm actually  
21 looking at the table, 1999 reflects the most  
22 volatility. In 2000, we see reduced volatility. So we  
23 see lower average numbers and that continues through  
24 the 2001 period.

25 Q. Are you on Table 1 of . . .

1 A. Help me where I'm supposed to be.  
2 Q. I'm sorry. I may have confused you. Are you on Table  
3 1 of Appendix A of LEB-2?  
4 A. Which is?  
5 Q. That would be the . . .  
6 A. Help me out.  
7 Q. . . . Resource Assessment that you helped prepare.  
8 A. Oh, I don't have a copy of that. I was looking at the  
9 AG Response.  
10 Q. Certainly.  
11 A. I apologize.  
12 Q. I'm sorry. I had you confused. I turned you to  
13 something and then asked about something else.  
14 MR. RIGGS:  
15 Ms. Blackford, . . .  
16 MS. BLACKFORD:  
17 Yes.  
18 MR. RIGGS:  
19 . . . I'm sorry. Were you addressing the question  
20 to me or . . .  
21 MS. BLACKFORD:  
22 No.  
23 HEARING OFFICER SHAPIRO:  
24 She was addressing a question . . .  
25

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MR. RAFF:

I think the witness needs an Exhibit.

HEARING OFFICER SHAPIRO:

Right. She was addressing a question to the witness for LEB-2; is that right?

MS. BLACKFORD:

That's correct.

Q. Table 1 on Appendix A, Page 5 of 10.

A. Okay. Page 5 of 10?

Q. Yes, sir. Given the confusion, let me go back to my original question and how I thought I heard you respond to it. What I'm trying to do is clarify whether I heard the response correctly. I had first asked you if, in that projection, prices appear to go up steadily over the years, and your answer was, in the early years, yes, but, in the latter years, you thought they began to decline, and so what I'm trying to clarify is where on that table it shows that they begin to decline.

A. Well, obviously, these tables do not decline. I did not give numbers out this far to them. There are some other projections that have been made, but we actually have provided the numbers through the early 2000 period . . .

Q. I see.

- 1 A. . . . and that's what I was speaking to in my testimony  
2 as far as there's liquid markets, because the liquidity  
3 of the market does not go beyond 2006-2007.
- 4 Q. So, in your . . .
- 5 A. So that was the numbers that were provided, and these  
6 are projections from those numbers, and, in general, a  
7 growth factor in those prices were carried out from  
8 that point to the latter years going out to 2027.  
9 Obviously, there's no liquidity in the market out in  
10 these numbers. So these are projections.
- 11 Q. And your input into it ceased with approximately 2000  
12 into this table?
- 13 A. I think actually we gave the numbers out in the 2004  
14 period to the liquidity of the market at the time we  
15 put in the testimony.
- 16 Q. All right. Through 2003, which I gather is in the  
17 period of your input, there is no decline in the  
18 pricing, is there, or in the numbers?
- 19 A. No, but it certainly is within the range of the numbers  
20 that we have seen in the marketplace during this  
21 period. The \$100 to \$150 range is certainly a range  
22 that we've seen for transactions that have actually  
23 occurred during this period. The market is rather thin  
24 in that area, and we don't see a lot of transactions,  
25 but, since I put my testimony in, I think I gave a

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

range, on Page 6 of my testimony, of \$100 to \$150. That range still continues and is kind of what we're seeing in the market if you buy a package for this period. Now, obviously, those numbers sometimes have been higher, and they've sometimes been lower than that but that range has been maintained.

Q. And, by "this period," you mean for 2003?

A. Out through 2003, yes.

Q. All right. Thank you. Now, we are done with that table. If we can turn to your Response to the Attorney General Information Request, Item 16, am I correct in stating that that Exhibit shows that the bid price for July and August of '99 was \$104, and then it declined to \$80 for July and August of 2000 and down to \$70 for July and August of 2001?

A. Yeah. The bid ask spread moved from \$104 to \$110 to \$80 to \$86 and \$70 to \$77; that's correct.

Q. And these are actual bid prices?

A. Yes, they were at the time which we responded to this interrogatory.

Q. Why didn't that original table we looked at reflect the declining prices?

A. Well, these are very specific off of the price sheets that you get from brokers, but the range of prices are still within the numbers in which they have used in

1 that \$100 to \$150 range for buying portions for that  
2 long a period. In other words, if you bought '99,  
3 2000, 2001, you would still be in that \$100 to \$150  
4 range. If you bought specifically the year 2000, then  
5 you would buy it in this \$80 to \$86 range.

6 Q. So this is a cumulative purchase. Am I understanding  
7 that you have to be buying for several years before the  
8 price stays in that range?

9 A. On this table, it's just the opposite from that. It is  
10 specifically for these years.

11 Q. Am I correct in understanding, then, if you're buying  
12 for specific years, your prices are declining?

13 A. Yes, very specific years.

14 Q. Thank you. That's all - wait a minute. That may not  
15 be all of my questions. Is there any expectation in  
16 your analysis that there will be a market correction in  
17 supply ultimately to meet the crunch of 1998 and that  
18 that might drive prices back down?

19 A. I think that the liquid markets are reflecting that  
20 currently by the very thing that we just went through.  
21 However, it's obvious to all of our attentions that  
22 people are building merchant plants that will not have  
23 cost-based prices, and they are putting money,  
24 significant money, hundreds of millions of dollars, at  
25 risk to meet markets that they believe will sustain

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

themselves throughout the period in which they install that capacity. We've got about 1,100 megawatts of merchant capacity that's being proposed here for the State of Kentucky, and they are all predicated on what they think the forward markets will bring.

Q. As I understand it, if this certificate is not approved, then these two CTs will be also merchant plants; is that correct?

A. That's correct. That's my understanding as well.

Q. So they're being built and sustained at that same price that the other merchant plants are being built and sustained?

A. You would only have to make that assumption that certainly two of the biggest players, the biggest market participants in the country, are building those plants. So you would assume they're smart enough that they're making a good investment.

MS. BLACKFORD:

Thank you. That's all of my questions.

A. Uh-huh.

CROSS EXAMINATION

1  
2 BY MR. RAFF:

3 Q. Mr. Kasey, do you know what the installed cost of these  
4 combustion turbines is projected to be?

5 A. No, I'm not aware of the specific numbers. I know the  
6 ball park, but I don't know the specific numbers.

7 Q. Well, what was your understanding of the ball park?

8 A. I think they're in the \$250 to \$350 range a kw.

9 Q. That's a wide range; is it not?

10 A. Yes, it is, but, because of the supply and demand in  
11 the market currently, that range is rather broad.

12 Q. Do you know what other combustion turbines are costing  
13 in today's market on a kilowatt basis?

14 A. It really depends, you know. Part of the problem -  
15 it's very difficult to compare. Part of the problem is  
16 an awful lot of the plants that are being proposed are  
17 greenfield plants, and, because they are greenfield  
18 plants, generally the cost is going to be much greater  
19 to provide the infrastructure to interconnect to the  
20 gas pipeline and also to the transmission systems, and,  
21 obviously, most of the merchant facilities that are  
22 being proposed, they're looking at both of those very  
23 carefully to mitigate that to the extent they can, but  
24 a new greenfield plant would probably be somewhere in  
25 the neighborhood, if we're talking about simple-cycle

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

combustion turbines, we're talking about up to \$500 a kw.

Q. There should be a cost advantage if that combustion turbine were to be installed in an existing generating plant where there are already combustion turbines, and there's already the gas pipeline, and the electrical substations, and all that other sundry equipment; is that correct?

A. That certainly would have some advantages; yes.

Q. Okay. And - I'm sorry - the name of the company that you now work for?

A. Is The ERORA Group, E-R-O-R-A.

Q. And is that in any way affiliated with LG&E?

A. It is not.

Q. Is that out of Louisville or . . .

A. Yes, it is in Louisville.

Q. And your relationship with LG&E was just being for this case; is that what you're saying?

A. That's correct. I obviously put in the testimony when I was Senior Vice President of LG&E Energy Marketing, and, upon retirement, I made a commitment to continue to support the pricing of the wholesale market which I'm currently in as well with my clients.

MR. RAFF:

Thank you very much. I have no further questions.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Any redirect?

MR. RIGGS:

None, Your Honor.

HEARING OFFICER SHAPIRO:

Thank you, Mr. Kasey.

WITNESS SWORN

The witness, LONNIE E. BELLAR, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. RIGGS:

Q. Please state your name, position, and business address.

A. Lonnie E. Bellar. My position is the Manager of Generation Systems Planning for KU and LG&E. My business address is 220 West Main Street, Louisville, Kentucky.

HEARING OFFICER SHAPIRO:

Mr. Bellar, will you spell your last name for the Reporter, please?

A. Yes, B-e-l-l-a-r.

Q. Did you cause to be prepared and filed with the Commission on February 11, 1999, written testimony consisting of nine written pages, an appendix marked "A," and two Exhibits?

A. Yes, sir.

1 Q. Do you affirm and adopt your testimony today?

2 A. Yes, sir.

3 Q. Mr. Bellar, could you comment on the status of your  
4 request for proposals for combustion turbines that's  
5 referenced in your Response to the AG's Request for  
6 Information, No. 11?

7 A. Yes, I will. The companies sent out a Request For  
8 Proposal for combustion turbines on April 1, and we  
9 were trying to assess the CT market for our future  
10 needs . . .

11 MR. RAFF:

12 I'm sorry. Is that April 1 of . . .

13 A. Of 1999, yes, sir, and we requested that the major  
14 turbine manufacturers respond to us within a two week  
15 time frame. So that would have put responses due April  
16 15. At that time, on April 15, we had only received a  
17 response from one vendor, and, after contacting the  
18 other vendors, they let us know that they needed  
19 additional time to respond given their workload that  
20 they had, and so we extended the time for two more  
21 weeks to April 29, and, at that time, we did receive  
22 bids from the major turbine manufacturers. After  
23 reviewing those bids, though, we determined that they  
24 were incomplete in scope. They weren't as detailed as  
25 historically we had seen. Historically, you were able

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

to tell exactly what was in the bids and what you were getting for what they were quoting, and these bids were very, very minimal in terms of detail. Also, and probably more concerning in terms of being able to do an accurate evaluation, none of the prices that were quoted were firm. Each manufacturer quoted budgetary pricing. So it's kind of difficult to do a comparison when you don't have firm quotes. Historically, bids were presented with firm quotes, and we had several months to do our evaluation, and we knew what we were going to get when we paid for it. In terms of our review, we started our review of the bids, but, given that they were incomplete and they had budgetary numbers in them, we decided it would be the best course of action to engage Black & Veatch, an outside consultant, to review those bids and prepare a comparative analysis for the companies, and we have done that, and we expect that analysis to be complete by the end of the week, and we would file that with the Commission under confidentiality. A couple of things I could share with you from the bids without voiding the confidentiality or maybe just from my perspective of what I've seen in the bids is that the pricing has not declined. The pricing that we've seen in the bids, as near as we can tell at this point, is at or above what

1 was paid for the combustion turbines that are being  
2 installed at the Brown facility, and I guess the  
3 assessment of how tight the CT market is there aren't  
4 any CTs available until 2001, and, at that point,  
5 there's only one manufacturer that has one type of  
6 machine available for that in-service. The other  
7 manufacturers won't have machines available for in-  
8 service until 2002 and 2003.

9 Q. Mr. Bellar, have there been any changes to the estimate  
10 of the cost of constructing the combustion turbines  
11 since the application and testimony was filed with the  
12 Commission?

13 A. Yes, sir, there have. In the certificate filing, the  
14 application, we had estimated, at that point, that the  
15 total combined cost would be \$125 million or \$381 per  
16 kw based on the summer rating of the machines, and, as  
17 we've progressed through the project, we now expect the  
18 total cost to be \$118 million and that would be \$360 a  
19 kw, again, based on the summer rating.

20 Q. Mr. Bellar, is the construction of the combustion  
21 turbines on schedule?

22 A. Yes, it is. There are two turbines, as we've been  
23 discussing, being constructed. The first turbine is CT  
24 Unit No. 7. It's expected to begin on-line testing in  
25 the middle of June for a mid-July in-service, and the

1 CT 6 is the second combustion turbine and that turbine  
2 now is, let's say, two to three weeks behind the first  
3 turbine.

4 Q. Mr. Bellar, the Attorney General asked Mr. Kasey some  
5 questions in connection with Table 1 of Appendix A,  
6 Page 5 of 10 of your Exhibit. Could you briefly  
7 clarify the relationship of that table to Mr. Kasey's  
8 testimony?

9 A. Sure. Mr. Kasey's testimony centered around the under-  
10 lying product pricing and the option pricing that was  
11 used in the analysis. The table that was just  
12 mentioned, Table 1 of Appendix A, did not represent  
13 that. This table represents spot market prices that we  
14 anticipate to occur. These are different than options  
15 or what we call the underlying product of power. These  
16 are what you would pay on an hourly basis, a projection  
17 of that, and these were utilized in the analysis but  
18 not to the extent that they affected the comparison of  
19 the options that we were using to compare to the  
20 combustion turbines, and those option prices, which  
21 would be applicable to the comparison, were submitted  
22 under confidentiality, and those prices do show a  
23 decline, as Ms. Blackford was mentioning. They do show  
24 a decline in future years.

25

1 MR. RIGGS:

2 Thank you, Mr. Bellar. Mr. Bellar is available  
3 for any questions.

4 HEARING OFFICER SHAPIRO:

5 Ms. Blackford.

6 CROSS EXAMINATION

7 BY MS. BLACKFORD:

8 Q. Educate me, please. I don't understand what a  
9 budgetary price is.

10 A. I would think that each turbine manufacturer would have  
11 their own opinion of that also, but, in my mind, they  
12 provide those numbers just to give you a ball park, and  
13 the reason they do that is because they don't have the  
14 time or have not taken the time to sit down and under-  
15 stand exactly what you want, and so they're unsure.  
16 They don't want to give you a firm price that they  
17 might have to change as they go into the analysis. So  
18 I would view budgetary as a nonfirm pricing subject to  
19 change as you get into negotiations with the individual  
20 vendors.

21 Q. So it's essentially a price range that perhaps includes  
22 the minimum and maximum parameters?

23 A. They did not provide us with a range in the specific  
24 bids. It was a single number, but I would think that  
25 the number could go up or down, yes, as a result of

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

negotiations.

Q. The RFPs were for installation when?

A. For combustion turbines? Given the status of the CT market and how tight it is, we didn't specify a specific time. We just asked that they quote us the machines that they had available as soon as they were available, and we would, you know, make our assessment based on the results of that.

Q. I asked this question of Mr. Willhite and he deferred it to you. In Response to the Attorney General's Information Request, Item 10, you were asked results of your RFP to determine the present cost of combustion turbines to see if you're correct that the cost of those turbines has continued to rise since you bought the ones at issue in this case, and the response was that the information is confidential, but, without violating the confidentiality, can we determine, in general, whether the prices are higher or lower than the \$280 per kilowatt paid to ABB for these two units?

A. The \$280 per kw, could you tell me the source of that number? I haven't calculated that particular number.

Q. Just a moment.

A. Sure.

Q. On the Application itself, . . .

A. Uh-huh.

1 Q. . . . Page 4, at the bottom of the page, there is Item  
2 (A), combustion turbines, priced at \$91,800,000.  
3 A. Okay. So you just took the \$91,800,000 and divided by  
4 328; okay. As I said in my introduction, I guess, the  
5 bids are budgetary, but, based on that, the pricing is  
6 higher for combustion turbines than what was paid in  
7 this case and that will be evident when we make that  
8 filing.  
9 Q. In your Resource Assessment contained in LEB-2, you  
10 looked only at the options of buying combustion  
11 turbines or building other turbines in future years; is  
12 that correct?  
13 A. In this specific Resource Assessment, yes.  
14 Q. Did you consider long-term power purchases or buying  
15 capacities from other parties?  
16 A. Define long-term power purchases.  
17 Q. As you would standardly use it, as you would use it in  
18 your lexicon.  
19 A. We evaluated in the Resource Assessment arrangements  
20 that we thought could be made with other counterparties  
21 and that was reflected by our estimation of the option  
22 premium market. As Mr. Kasey testified, those numbers  
23 did decline over time, and I think they've been in  
24 various parts of the record, and, to the extent that we  
25 could sign up multiple years at those prices, that was

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

the assumption that we made; yes.

Q. Did you consider buying capacity from other parties?

A. We used the option premium to represent that . . .

Q. That capacity?

A. . . . capacity; yes.

Q. Am I correct in understanding that Dynergy is building a CT facility in Oldham County? It will be inter-connecting to the transmission . . .

A. Yes.

Q. . . . capacity of LG&E?

A. Yes.

Q. Was consideration given to buying power from Dynergy?

A. We specifically did not contact Dynergy, but we did send out a Request For Proposal for purchased power, and they obviously were on that list, and they did provide a response. Now, to the extent that it would come from that facility, I don't know. Dynergy has many resources, I'm sure.

Q. So some pricing information was received from Dynergy and like parties?

A. Yes.

Q. In your Response to the Attorney General Information Request, Item 3, you have characterized the failure of the ABB 11N2 combustion turbine as a problem. Am I correct in stating that the problem that occurred was

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

that the blades in the fourth stage fell off and tore up one of the turbines?

A. We did have a blade failure at that unit. I'm not aware that it damaged the rest of the turbine. I inspected the site after the event, and there was significant damage to the machine, but I wouldn't characterize it as damaging the rest of the turbine.

Q. Was the machine . . . .

A. The fourth stage blade is the last set of blades on the machine. So therefore the damage would not be back on the machine.

Q. Did it render the machine nonfunctional?

A. Yes.

Q. Could I correctly characterize this as a major failure akin to losing the engine of your car?

A. Yes.

Q. Given that this was a major failure, why did LG&E immediately go back to the same manufacturer for its next turbines?

A. These are different machines, as responded to in AG 3, than the machines that you're discussing now. These machines are not one of the first machines produced as the 11N2s were, and, as we mentioned here, we were confident with ABB as a supplier of this type of equipment, and we felt that it was prudent to consider

1           them for a supplier of future combustion turbines.  
2       Q.    So there is no concern about the quality of this  
3           equipment?  
4       A.    None more than any other vendor that we would have  
5           installing any equipment.  
6       Q.    Would you please turn to your Response to the Attorney  
7           General's Information Request, Item 12? The last page  
8           of that Response contains a generation expansion plan  
9           that was attached to the Minutes of the Operating  
10          Committee Meeting of February 2, 1999.  
11       A.    Yes, it does.  
12       Q.    Is this the generation expansion plan presented to Mr.  
13           Lucas, Mr. Wood, Mr. Hewett, and others to justify the  
14           filing of this case on February 11?  
15       A.    Yes.  
16       Q.    Do I correctly understand that the expansion plan shows  
17           the two units that are at issue here and all combined-  
18           cycle units in future years?  
19       A.    The Exhibit that you're referencing does show one  
20           additional simple-cycle combustion turbine being  
21           constructed in 2002. That would be Brown Unit 5. That  
22           would be the last unit that we both have physical  
23           ability and environmental permit ability to install at  
24           the site, and then, after that, it shows simple-cycle  
25           combustion turbines being constructed in a phased

1 fashion culminating in the installation of a combined-  
2 cycle unit in 2004.

3 Q. And in all years beyond that?

4 A. Yes.

5 Q. Can you tell me whether you assumed the addition of  
6 Brown 6 and 7 as a factor in the computer simulation  
7 and constrained the computer to add the units or  
8 whether the computer selected the options on its own?

9 A. In what particular analysis are you referencing?

10 Q. In the analysis giving rise to this expansion.

11 A. This expansion plan?

12 Q. Uh-huh.

13 A. In this particular expansion plan, we were assessing  
14 the short-term needs for '99 and comparing that to the  
15 option premium, the analysis that you're referencing  
16 here that was presented to the Operating Committee,  
17 and . . .

18 Q. Uh-huh.

19 A. . . . therefore we manually put those alternatives in  
20 and moved them around in the computer simulation.

21 Q. So it was a constrained simulation?

22 A. Yes.

23 Q. Your years out, other than the Brown 5, show that what  
24 will be needed is intermediate capacity; is that  
25 correct?

1 A. Repeat the question, please.

2 Q. Other than the other Brown, the one you referred to as

3 Brown 5, . . .

4 A. Uh-huh.

5 Q. . . . the final simple-cycle turbine, the years out

6 show that what's needed is intermediate capacity; is

7 that correct?

8 A. This particular expansion plan does. Since this one

9 was developed and presented as a part of this Resource

10 Assessment and as referenced in one of the Responses -

11 I don't recall off the top of my head - we have done

12 further analysis that suggest that additional

13 combustion turbines be installed before we move toward

14 combined cycle. So, if you were to ask me what I think

15 the expansion plan will be in our 1999 Integrated

16 Resource Plan, my answer would be, in terms of

17 construction alternatives, that combined cycles would

18 not be needed as soon as reflected in this particular

19 Exhibit.

20 Q. All right. This is the most recent expansion plan that

21 you have as evidence in this case; right?

22 A. No. There is another expansion plan in the record. We

23 can try to find it if you're - I can't recall what

24 Response that we provided that expansion plan, but

25 there is another expansion plan in the record that

1 shows additional simple-cycle combustion turbines  
2 before we go to combined cycles, but it is in the  
3 record. In the Resource Assessment, my Exhibit, I  
4 reference where preliminary studies have suggested that  
5 to be the case.

6 Q. There is another expansion plan in Response to AG 17(a)  
7 and (b), Page 1 of 1.

8 A. Yes.

9 Q. Is that the other one you're referencing? It appears  
10 to be a month earlier.

11 A. Yes, it is.

12 Q. So this one in Response to PSC 1, Page 6, which is  
13 dated February of '99, is the latest; is that correct?

14 A. Back on AG 6, is that what you - no. Let me see. AG  
15 12.

16 Q. On AG 12, yes.

17 A. Okay.

18 Q. Its pagination is Item No. PSC 1, Page 6.

19 A. Okay. Yeah. The expansion plan in Response to AG 12  
20 was the one used in the Resource Assessment, and it was  
21 the one used in presenting the information consistent  
22 with the Resource Assessment to the Operating  
23 Committee.

24 Q. But you're saying there's a third expansion plan  
25 somewhere in this filing that's more recent?

1 A. No. No. I was going to finish my statement in saying  
2 that the second expansion plan, as a Response to AG 17,  
3 was the one that was being referenced in the Resource  
4 Assessment. In order to develop the Resource  
5 Assessment, we depended on the preliminary expansion  
6 plans of the two combined companies and proceeded with  
7 that, but, while that assessment was ongoing, we  
8 continued to do studies and we continue to do those  
9 studies today in preparation for our 1999 IRP. The  
10 expansion plan in Response to AG 17 is our preliminary  
11 results from that.

12 Q. But, again, the one that's filed in Response to AG 12  
13 is your most recent one?

14 A. It was the one that was used in the Resource  
15 Assessment. I would present the Response to AG 17 as  
16 being more reflective of the company's views at this  
17 point today, and I know the dates on those are  
18 different, but I would represent AG 17 as being more  
19 like the expansion plan the company will file in its  
20 1999 Integrated Resource Plan.

21 Q. You haven't filed any of your more recent assessment  
22 plans as evidence in this case?

23 A. No, we have not.

24 MS. BLACKFORD:

25 Thank you. That's all of my questions.

CROSS EXAMINATION

1  
2 BY MR. RAFF:

3 Q. Mr. Bellar, let me ask you a couple of questions to  
4 begin with that Mr. Willhite referred to you. During  
5 the time frame of August/September, 1998, was LG&E's  
6 and KU's internal analysis developed in sufficient  
7 detail to have supported the application at the  
8 Commission for a Certificate Convenience and Necessity?

9 A. No, it was not. At that time, in terms of a case  
10 sufficient for filing, we had not prepared that. We  
11 had done a preliminary revenue requirements analysis,  
12 at that point, that, as we have stated, showed that  
13 these combustion turbines appeared to be the most  
14 economical resource.

15 Q. Were the individuals who prepared the limited and  
16 preliminary analysis for LG&E and KU in August of 1998  
17 the same individuals who prepared the LG&E Energy Corp.  
18 analysis in September?

19 A. Some of the same individuals prepared both of those  
20 analyses. The teams that had involvement in preparing  
21 and supplying information for the Resource Assessment  
22 and the analysis that you just mentioned, some of those  
23 members are different, but, with respect to the  
24 personnel under my responsibility, we participated in  
25 both analyses.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MR. RAFF:

I've got a number of other questions, but they all relate to the confidential filing. So, if we can ask that, I guess, anybody that isn't with LG&E and KU to . . .

HEARING OFFICER SHAPIRO:

Okay. You're going to ask some questions about the confidential material?

MR. RAFF:

Yes.

HEARING OFFICER SHAPIRO:

This part of the transcript then will be sealed.

MS. BLACKFORD:

We didn't sign it.

MR. RAFF:

You've not agreed to sign a confidentiality?

HEARING OFFICER SHAPIRO:

You haven't signed it?

MS. BLACKFORD:

We haven't signed it.

MR. RAFF:

Okay.

MS. BLACKFORD:

We haven't seen a need to, to this point.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Well, let's take about ten minutes and . . .

MR. RIGGS:

Fine.

HEARING OFFICER SHAPIRO:

. . . I'll let you all work that out amongst yourselves.

OFF THE RECORD

HEARING OFFICER SHAPIRO:

We'll proceed with the confidential portion at this time. It's my understanding that Ms. Blackford has signed the confidentiality agreement but Mr. Kinloch has not, and Mr. Kinloch is not present in the room nor is - there's one other individual here who is not a party to this proceeding, but everybody else is either a member of the Commission staff or is an employee of the applicant; is that right?

MR. RIGGS:

That is correct, Your Honor.

OFF THE RECORD

(CONFIDENTIAL PORTION CONTAINED IN SEPARATE TRANSCRIPT CONSISTING OF 28 PAGES)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Early in the proceeding, we discussed the fact that one of the people who furnished information for the Data Request was Mr. Robinson, . . .

MR. RIGGS:

Yes, that's correct, Your Honor.

HEARING OFFICER SHAPIRO:

. . . and he would be subject to cross examination. You haven't filed any testimony for him, but I assume they want to question him on some of the information.

MR. RIGGS:

Yes.

HEARING OFFICER SHAPIRO:

So why don't we call him at this time?

MR. RIGGS:

Yes. We'll be pleased to call Mr. Robinson to the stand.

MR. RAFF:

Are we done with all the other witnesses?

MR. RIGGS:

Yes. That concludes the presentation of our testimony and I would ask that Mr. Bellar's testimony be admitted into the record.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

So ordered.

MR. RIGGS:

Thank you, Your Honor.

WITNESS SWORN

The witness, MICHAEL ROBINSON, after having been first duly sworn, testified as follows:

EXAMINATION

BY HEARING OFFICER SHAPIRO:

Q. Let me first ask the witness to identify himself.

A. Yes. I am Michael Robinson, Vice President and Controller for LG&E Corp., Kentucky Utilities, and Louisville Gas and Electric.

Q. And what is your address, Mr. Robinson?

A. It's 220 West Main Street, Louisville, Kentucky 40202.

HEARING OFFICER SHAPIRO:

Okay. Ms. Blackford, do you have any questions of this witness?

MS. BLACKFORD:

No, I do not.

HEARING OFFICER SHAPIRO:

Mr. Raff?

MR. RAFF:

Thank you.

CROSS EXAMINATION

1  
2 BY MR. RAFF:

3 Q. Mr. Robinson, even though LG&E Capital Corp., which is  
4 an unregulated affiliate, is constructing the  
5 combustion turbines, are the construction costs being  
6 capitalized consistently with the requirements of the  
7 FERC Uniform System of Accounts?

8 A. Yes, they are.

9 Q. Under the Uniform System of Accounts, when would a  
10 project, like the combustion turbines, be considered  
11 completed and construction finished?

12 A. I think that when they are ready to serve the load,  
13 once the testing is complete and they're ready to be  
14 synchronized with the grid and serve the load.

15 Q. Would this point in time be the same as the in-service  
16 date?

17 A. Generally speaking, I would view those the same date.

18 Q. Do you know the approximate date when the construction  
19 of the combustion turbines will be considered completed  
20 for accounting purposes?

21 A. Right now, it's anticipated to be sometime during the  
22 month of July. I think, in our application, we  
23 indicated it was August 1 we were shooting for, but,  
24 right now, we're on plans to hopefully complete the  
25 testing and have them ready for commercial operation

1           sometime in the month of July if we can. So it's  
2           somewhere in the July to August time frame.

3   Q.    I believe the testimony was that one of the units was  
4           about two weeks ahead or two weeks behind the other; is  
5           that correct?

6   A.    I've heard that; yes. My understanding is that one is  
7           a little bit further along than the other one.

8   Q.    So will there then be a different date for each unit;  
9           do you know?

10   A.    Yes, it would be.

11   Q.    Now, regarding the test energy, is it correct that,  
12           before the turbine construction is considered finished,  
13           the units will undergo operational testing, and the  
14           electricity will be sold during that period of time?

15   A.    Yes, that would be pretty standard routine for this  
16           type of testing and these assets.

17   Q.    And the sale of that energy will be by LG&E Capital  
18           Corp.; is that true?

19   A.    If, at that time, the ownership hasn't been  
20           transferred, Capital Corp. would be the one that would  
21           take on the responsibility of testing those units for  
22           operational efficiency and effectiveness; yes.

23   Q.    And, assuming the energy is sold by LG&E Capital Corp.,  
24           would it be fair to assume that it will incur some  
25           transmission costs?

- 1 A. Yes, I think that would be a fair assumption.
- 2 Q. And those are probably on the KU system?
- 3 A. I believe that Capital Corp. would have to enter into  
4 transmission requirements under the OATT.
- 5 Q. Under the Uniform System of Accounts, is it correct  
6 that the revenue from the test energy sales and any  
7 transmission costs would be included as components of  
8 the construction costs?
- 9 A. Yes, it would. That's very standard.
- 10 Q. And, similarly, would any revenues from the sale of  
11 test energy be included as a construction cost for LG&E  
12 Capital?
- 13 A. Yes. It would be credited and reduce the construction  
14 costs. The revenues derived from that test energy  
15 would reduce the capital costs on Capital Corp.'s  
16 books; yes. Now, once again, that's very routine and  
17 standard for this type of operation.
- 18 Q. Do you know whether the impact of the revenues and  
19 expenses associated with test energy have been  
20 reflected in what has previously been the estimated  
21 project cost of \$125 million?
- 22 A. I do not know.
- 23 Q. In Response to the Commission's Data Requests of March  
24 16 and 19, 1999, Item 18d), . . .
- 25 A. You said "b" as in boy?

1 Q. "D" as in dog.  
2 A. "D" as in dog?  
3 Q. Is it correct that, by charging the work orders to  
4 Account No. 107, construction work in progress, these  
5 costs will be reflected on KU's balance sheet but not  
6 its income statement?  
7 A. That's correct.  
8 Q. The total of these costs listed in the Response, as of  
9 February 28, 1999, is \$208,226. Do you know what the  
10 current total is?  
11 A. Yes. As of the end of April, '99, which is the end of  
12 our most recent calender month because May we haven't  
13 closed yet, that was \$921,804.  
14 Q. If we assume that the Commission approves the request  
15 by LG&E and KU to acquire the turbines and if we also  
16 assume that the actual construction cost is lower than  
17 the fair market value, will the construction costs  
18 incurred by KU, which have been tracked by work orders,  
19 be transferred to LG&E Capital Corp. and then  
20 transferred back to KU and LG&E as part of the  
21 acquisition costs?  
22 A. My preference would be not to. I think, since the  
23 decision is pending, I think we would hold up any  
24 transfer costs until a final decision is rendered by  
25 this Commission, would be the preferred method.

- 1 Q. So, if we assume that the Commission does approve the  
2 request, after a Commission Order is issued approving  
3 the acquisition, what would take place then? Would the  
4 work orders be transferred to LG&E Capital Corp. and  
5 then transferred back, or would there be no transfer at  
6 all?
- 7 A. If the Commission approves the request, there would be  
8 no transfer necessary. It will just stay on the  
9 utility's books as incurred, and it would then be  
10 billed to Louisville Gas and Electric, its share of  
11 those costs, based on the 62-38 joint ownership  
12 requirement.
- 13 Q. If you would refer for a moment, please, to the  
14 Response to the Commission's April 9, 1999, Order, Item  
15 1a., the last paragraph of the Response indicates that,  
16 if the Commission does not grant the Certificate of  
17 Public Convenience and Necessity, it would be  
18 appropriate for KU and LG&E Capital Corp. to enter into  
19 a Lease and Service Agreement for the portion of KU's  
20 property where the turbines are located. Is there a  
21 reason why a Lease Agreement would be more desirable  
22 than a sale of that particular parcel of property?
- 23 A. I think that would probably be desirable for the  
24 utility to maintain ownership of the land and then to  
25 lease that land to Capital Corp. and maintain ownership

- 1 of the land. So that's why I think a lease for the  
2 land would be more appropriate than an outright sale of  
3 the land.
- 4 Q. Under your corporate policies and guidelines for  
5 intercompany transactions, there's some discussion of  
6 transfer of sale of assets between regulated and  
7 unregulated affiliates, but the guidelines do not  
8 specifically discuss leases. Could you describe what  
9 factors would have to be considered in structuring a  
10 lease arrangement that would conform to the  
11 requirements of the guidelines?
- 12 A. I think that a lease arrangement should be based on  
13 what the fair value of that asset is that's being  
14 leased. If you're leasing an asset, I think the lease  
15 arrangement ought to be very similar to having actually  
16 sold that asset, and you would lease it under the  
17 economics that would be based on fair value, and you  
18 would come up with a lease arrangement in accordance  
19 with the value of the item being leased at its net  
20 replacement cost or at its fair market value.
- 21 Q. So would you envision having to obtain an appraisal of  
22 the property?
- 23 A. I would believe that would be a strong basis just to  
24 support the value of the land, yes, and, under an  
25 affiliate leasing arrangement, that would probably be

- 1           necessary.
- 2   Q.    Regarding the securing of Exempt Wholesale Generator  
3       status from FERC for LG&E Capital Corp., can you tell  
4       us what costs have been incurred to date for that  
5       effort?
- 6   A.    Yeah, I have inquired with our legal staff as far as  
7       the status of that process and the costs, and I don't  
8       believe all the costs have come in yet, but it's  
9       anticipated it will probably be in the \$10,000 to  
10      \$20,000 range, is the view of the legal staff that I  
11      inquired of as far as what might be the anticipated  
12      costs of that EWG filing.
- 13   Q.    If LG&E or KU had to incur a similar type of cost while  
14      constructing a turbine, would such cost be a component  
15      of the construction cost and capitalized?
- 16   A.    I believe so. I think it's a valid cost that's  
17      necessary in order to make that asset operational.
- 18   Q.    Would it be similar to the cost incurred in obtaining a  
19      Certificate of Convenience and Necessity?
- 20   A.    Yes, sir.
- 21   Q.    Will the cost incurred for obtaining EWG status be  
22      capitalized as a part of the construction cost by LG&E  
23      Capital Corp.?
- 24   A.    Yes, it will.
- 25   Q.    If you know, will LG&E Capital Corp. be operating the

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

turbines pending the Commission's ruling in this case,  
or will there be a facility's operation agreement with  
an LG&E Energy Corp. affiliate?

A. Well, I think the legal operation will be by Capital  
Corp.

MR. RAFF:

Thank you, Mr. Robinson. We have no further  
questions.

HEARING OFFICER SHAPIRO:

Mr. Riggs?

MR. RIGGS:

No redirect, Your Honor. Thank you.

HEARING OFFICER SHAPIRO:

Thank you, Mr. Robinson. That concludes the case  
for the applicant; is that correct?

MR. RIGGS:

That does conclude the case for the applicant,  
Your Honor.

HEARING OFFICER SHAPIRO:

Let's go off the record a minute.

OFF THE RECORD

HEARING OFFICER SHAPIRO:

Okay. Let's go back on the record. Ms.  
Blackford, do you want to call your witness,  
please?

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MS. BLACKFORD:

I'm sorry; yes.

HEARING OFFICER SHAPIRO:

Do you want to call your witness?

MS. BLACKFORD:

Yes, David Brown Kinloch, please.

HEARING OFFICER SHAPIRO:

Okay.

WITNESS SWORN

The witness, DAVID H. BROWN KINLOCH, after having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. BLACKFORD:

Q. Mr. Brown Kinloch, would you state your full name and address for the record, please?

A. My name is David H. Brown Kinloch. My address is 414 South Wenzel Street, Louisville, Kentucky 40204.

Q. Are you the same David H. Brown Kinloch who has prepared testimony on behalf of the Attorney General and prefiled that testimony in April of '99?

A. Yes, I am.

Q. Do you have any amendments or corrections to that testimony?

A. No, I do not.

Q. Do you affirm and adopt the testimony as filed here

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

today?

A. Yes, I do.

MS. BLACKFORD:

The witness is available for cross.

HEARING OFFICER SHAPIRO:

Do you wish to introduce it into the record? Ms. Blackford, do you wish to make it a part of the record?

MS. BLACKFORD:

Yes.

HEARING OFFICER SHAPIRO:

So ordered.

MR. RIGGS:

May I proceed?

HEARING OFFICER SHAPIRO:

Yes.

CROSS EXAMINATION

BY MR. RIGGS:

Q. Good afternoon, Mr. Kinloch.

A. Good afternoon, Mr. Riggs.

Q. As I read your testimony, your testimony addresses what you describe as the "problems created by the non-conventional approach," of the applicants in this case; is that a fair statement?

A. That's a good characterization; yes.

- 1 Q. Now, your testimony does not address the load forecast  
2 of the companies; does it?
- 3 A. That's correct.
- 4 Q. So your testimony does not take exception to the load  
5 forecast?
- 6 A. No. I just take that as a given.
- 7 Q. Will you agree with me that, subject to checking the  
8 evidence in the record in this case, that the forecast  
9 shows the companies have a joint need for 470 megawatts  
10 of peaking capacity beginning in the summer of 1999?
- 11 A. I don't know if I would agree with that. They have a  
12 need for 470 megawatts of capacity. I'm not sure I  
13 would agree that it's peaking capacity.
- 14 Q. Okay. And, if the Commission grants LG&E and KU the  
15 acquisition of the two 164 megawatt combustion  
16 turbines, the companies will still have an additional  
17 142 megawatts of capacity that they'll need this  
18 summer?
- 19 A. Including the reserves, yes, to meet the reserve need.
- 20 Q. And, if the Commission denies the requested  
21 certificate, the companies will still have a joint need  
22 for 470 megawatts of capacity this summer?
- 23 A. Including the reserve margin, yes.
- 24 Q. In preparing your testimony, you stated that you  
25 reviewed the most recent Integrated Resource Plans of

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

LG&E and KU; is that not true?

A. That's correct.

Q. Isn't it true, Mr. Kinloch, that the expansion plans in each of the companies' IRPs show the installation of simple-cycle combustion turbines as the next physical asset addition?

A. Next physical asset addition - I would have to go back and look. The KU one did, but the LG&E one had a number of different ways of meeting the load, including direct load control, standby generation by customers. It had an upgrade of the hydro facility. It had a battery - using batteries for peaking.

Q. Is it not true, though, that LG&E's most recent IRP or Integrated Resource Plan showed that LG&E planned to add a 108 megawatt combustion turbine in Trimble County in 1999?

A. Subject to check. I've got it over there if you want to look, but that sounds about right.

Q. Okay.

A. It did have some other things coming on before that, including buying power and direct load control, before 1999.

Q. Your testimony at Page 9, Lines 7 and 8, states that "LG&E Capital purchased the only units available from the only supplier that had units available for sale";

1 is that not true?

2 A. Yes.

3 Q. Your testimony at the same Page 9, Lines 10 and 11,  
4 states that it was a seller's market when LG&E Capital  
5 purchased the combustion turbines following the summer  
6 of 1998; is that not true?

7 A. Right.

8 Q. At Page 11 of your testimony, Lines 19 and 20, you  
9 state it is just as likely that the prices for  
10 combustion turbines - I'm paraphrasing just a little -  
11 may moderate somewhat when a number of suppliers have  
12 equipment and are able to bid; is that not true?

13 A. That's correct; yes.

14 Q. There are only three suppliers of combustion turbines  
15 in the market at this time, ABB, GE, and Siemens/  
16 Westinghouse; is that your understanding?

17 A. That is - of the units the size that you're talking  
18 about. There are some people that make smaller units.

19 Q. But of the units the size that is the subject of the  
20 case that we're talking about today . . .

21 A. Those are the three major vendors; that's right.

22 Q. Right. Now, your testimony did not present any  
23 evidence that those suppliers had combustion turbines  
24 available today for purchase and installation; did it?

25 A. No. I think that the purpose of me bringing this up

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

was the fact that - was the question of whether this was the best option now or whether it or something else should be done in the future instead.

Q. And your testimony presented no evidence or analysis of when the combustion turbine manufacturers can have machines available in the future; did it?

A. That's correct.

Q. Would you agree with me that, in a seller's market, the seller does not have to accept conditional sales and can demand its own terms for a sale?

A. That may be the situation. It depends. I don't know. A seller's market could be just about anything.

Q. Would you agree with me that, in a seller's market, the seller has the position to tell the buyer that the buyer can take it or leave it, purchase the goods or the service on the seller's terms?

A. The seller is in a better position in a seller's market.

Q. And that better position allows the seller to refuse to accept conditions the buyer, in a buyer's market, would typically request and receive; isn't that true?

A. It may. It depends on the particular seller. The seller is still trying to sell. It depends on whether the seller would accept those conditions, whatever they may be, or not. I can't presuppose what it would be.

- 1 Q. And the fashionable behavior by a seller in a seller's  
2 market would be to negotiate from what you characterize  
3 is a better position as the seller?
- 4 A. They're negotiating from a stronger position.
- 5 Q. And that stronger position or that strength allows them  
6 to negotiate terms that they would not have to accept  
7 if they did not have that strength; isn't that true?
- 8 A. I don't know. It's not necessarily true. I mean, the  
9 hope is that they could take their commodity they're  
10 trying to sell, in this case a combustion turbine, to  
11 another particular buyer, but, at some point, the  
12 seller is trying to sell the thing, whatever they're  
13 trying to sell, in this case a combustion turbine, and  
14 they will agree to terms with someone if they actually  
15 do want to sell that piece of equipment.
- 16 Q. The terms on which the seller agrees will be terms  
17 based upon what you've previously stated is the  
18 strength of the seller's position?
- 19 A. It would have a better negotiating position, but the  
20 terms would end up being whatever the buyer and the  
21 seller came to agreement upon.
- 22 Q. You testified in the combustion turbine case several  
23 years ago brought by Kentucky Utilities for a  
24 Certificate of Convenience and Necessity to acquire or  
25 install combustion turbines at the Brown site; did you

1 not?  
2 A. That's correct.  
3 Q. Do you recall the vendor of Westinghouse sitting in the  
4 lobby of the Hearing Room that day and then submitting  
5 a bid outside the bid timelines after the hearing was  
6 closed to the company?  
7 A. I do not remember that; no.  
8 Q. If the record of evidence showed that in that case, you  
9 would accept that; would you not?  
10 A. If the record showed that, yeah.  
11 Q. Okay. Are you familiar with the 1999 summer assessment  
12 of load and capacity for the East Central Area of  
13 Reliability Coordination Agreement?  
14 A. No, I'm not familiar with that.  
15 Q. Are you generally familiar with what ECAR is?  
16 A. Oh, yes.  
17 Q. Okay. And what is that, please?  
18 A. It's a region of the country in which there are a group  
19 of utilities, including the applicants, that are  
20 together for reliability reasons and other reasons.  
21 Q. Do you know whether or not ECAR has published a report  
22 on its assessment of the summer of 1999?  
23 A. No, I don't, but I imagine they may have. It's the  
24 kind of thing they do.  
25 Q. It's a typical report that they would issue in

1 connection with their responsibilities towards one  
2 another and as part of their ECAR agreement; isn't it?  
3 A. If you say so. I mean, I know they have particular  
4 forecasts. They pull together the different data from  
5 the different utilities in their region.  
6 Q. Would you agree with me that it is of concern that  
7 ECAR's May, 1999, report states that it will likely  
8 need to use supplemental capacity resources to meet its  
9 projected peak demand and that severe weather  
10 conditions or unexpected generator outages and the  
11 unavailability of power from outside the region could  
12 make it necessary to curtail additional load beyond  
13 contractually interruptible loads in demand-side  
14 management?  
15 A. If that's what it says. I mean, I don't have the  
16 report. I haven't read the report, Mr. Riggs.  
17 Q. Okay. One of the complications you describe in your  
18 testimony is the price the applicants paid; is that not  
19 true?  
20 A. That's correct.  
21 Q. Your testimony states that the applicants paid a  
22 premium for the combustion turbines; is that not true?  
23 A. I stated that it's a premium over what was in the  
24 previous IRPs as far as the cost that they would expect  
25 to pay for combustion turbines.

- 1 Q. In arriving at that portion of your testimony, in which  
2 you state that the applicants paid a premium for the  
3 current combustion turbines, you compared the price of  
4 the combustion turbines in the 1996 KU Integrated  
5 Resource Plan with the price of the combustion turbines  
6 that was identified in the applicants' application in  
7 this case; did you not?
- 8 A. That's exactly it; yes.
- 9 Q. And, to make those prices comparable, you restated them  
10 on a per kw basis; did you not?
- 11 A. That's correct.
- 12 Q. And the price of the combustion turbine that you  
13 identified as being contained in the 1996 KU Integrated  
14 Resource Plan, I believe, was \$198 a kilowatt; is that  
15 correct?
- 16 A. That's right, and I think it was for, like, a 110  
17 megawatt machine.
- 18 Q. Now, would you agree with me that the \$198 a kilowatt  
19 is stated in terms of 1995 dollars?
- 20 A. I believe that's correct; yes.
- 21 Q. Would you further agree with me that the KU 1996  
22 Integrated Resource Plan uses or contains an escalation  
23 rate of approximately .037 percent?
- 24 A. I'm not sure if that's what it contains.
- 25 Q. I'm sorry. I misspoke, Mr. Kinloch. It's 3.7 percent.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

Let me, with permission of your counsel, show you Volume III of the Integrated Resource Plan of Kentucky Utilities Company filed with the Commission on April 22, 1996, marked "Technical Appendix." Page 1 of Appendix A, Optimal Generation Expansion Strategy Analysis, March, 1996, Page 1 of that and in the section describing the data items used in the generation planning models, I'll ask whether or not that shows a construction escalation rate of 3.7 percent.

A. Yes, it does. It was an assumption that was in that model.

Q. Would you agree with me, to compare the \$198 a kilowatt with the value of the combustion turbine in this case, which you calculated to be \$381 a kilowatt, that you would need to escalate the 1995 dollars by that construction rate to state them in terms of 1998 or 1999 dollars?

A. Not necessarily.

Q. You think it's appropriate to compare 1995 dollars to 1999 dollars without escalating the change over time for inflation?

A. Well, I didn't say that. It's just a question of using the figure you have there. Inflation has been lower than 3.7 percent over the three years since then. So

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

I'm not necessarily saying that 3.7 percent - it would probably be escalated but not necessarily by the numbers you have in there. That was just a projection that KU had made on what they expected those costs to rise at.

Q. You do agree that it was the escalation rate contained in the KU 1996 IRP, and, in that IRP, you selected the value of \$198 a kilowatt-hour as a reasonable value for a combustion turbine?

A. That was the figure that was in there for the combustion turbines to be added at the Brown site. That figure came right out of the IRP.

Q. Now, you said that the escalation rate for construction contained in the IRP may or may not an appropriate value, but you would agree with me that, to accurately compare the price of the combustion turbines in this case with the value contained in the KU Integrated Resource Plan, you would have to escalate the estimate of 1995 so that it would be restated in 1996 dollars; would you not?

A. You mean 1998 dollars.

Q. You could do it either way. You would agree with me it has to be escalated?

A. It could - yeah, I mean, that's a way you could do it. I think, you know, we're talking about I was making the

1 point that the price was twice what it had been in  
2 there and, if you escalate it by a couple percent  
3 inflation for three years, that's a 6 percent increase  
4 compared to a 100 percent increase. There's not much  
5 of a comparison.

6 Q. Do you agree with me that inflation does not  
7 necessarily track the construction inflation rate, the  
8 general rate of inflation does not track the escalation  
9 rate that you would use for construction?

10 A. Not necessarily. I mean, a lot of your construction  
11 cost is labor which tends to move with inflation. It  
12 doesn't track it exactly, but I think it's pretty  
13 close.

14 Q. And you did not escalate the dollars in your analysis  
15 to restate the 1995 dollars in terms of 1998 or 1999  
16 dollars; did you?

17 A. No. As I stated to you before, I was making a  
18 comparison that something that's jumped by about 100  
19 percent is not going to be made up by inflation over a  
20 three year period.

21 Q. Would you accept, subject to check of the following  
22 mathematics, that, if you took the construction  
23 escalation rate of 3.7 percent and the KU 1996 IRP and  
24 escalated that to 1999 dollars, that that would  
25 mathematically make the \$198 a kilowatt into \$229 a

- 1 kilowatt?
- 2 A. Mathematically, yes, but I don't know why you would do  
3 that, Mr. Riggs, because you bought these combustion  
4 turbines in 1998; not 1999. You wouldn't put it in  
5 1999 prices for a good comparison. Then you would be  
6 having the same problem.
- 7 Q. You nevertheless would agree with me that, to make the  
8 values comparable, that you would need to adjust the  
9 dollar values?
- 10 A. You could. I mean, if you assumed, say, 3 percent for  
11 three years, that's about 10 percent. That would be  
12 about \$220 compared to \$381. That's still roughly  
13 double.
- 14 Q. I believe your testimony also indicates that there is a  
15 difference in efficiency or heat rate between the  
16 combustion turbine identified in the 1996 KU IRP versus  
17 the combustion turbines that are the subject of this  
18 case.
- 19 A. That was taken from a Response given by the applicants;  
20 yes.
- 21 Q. And, in your testimony, I believe you generally  
22 approximated the value of that efficiency to be about  
23 10 percent. In other words, the difference between the  
24 cost of the combustion turbine identified in the '96 KU  
25 IRP and the cost of the combustion turbines in this

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

case, in part, can be explained by the increased deficiencies that the combustion turbines in this case have?

A. That's correct, and that was based on figures from the IRP. The '96 IRP looked both at the smaller 110 megawatt unit and a larger unit, I think, like 150, which the larger the units get they tend to be more efficient.

Q. Yeah, and would you agree with me that, to make the proper comparison, that the heat rate efficiencies and the price paid to achieve those higher efficiencies would need to be taken into account as part of this comparison?

A. Yeah. I think that's the reason I put that in my testimony, that that does need to be considered; yes.

Q. Would you further agree with me that the value of \$198 a kilowatt, identified in the '96 KU IRP, was based upon the cost of the combustion turbine without the cost of constructing that turbine?

A. No. The price was taken as the total cost, including the construction of the turbine. That was the full price. It's not just the price of the turbines. It's the completed installed price.

Q. Would you agree with me that the scope of the work to complete the combustion turbine in this case is

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

different than the scope of the work that was assumed for purposes of identifying the price of the combustion turbine in the '96 KU IRP?

A. No, I don't . . .

Q. Do you know?

A. There's no reason for me to believe there would be any difference.

Q. Would you also agree with me that the current combustion turbines in this proceeding will require a demineralizer and that cost was not taken into account along with other differences between these combustion turbines and the combustion turbines in the '96 IRP?

A. I'm not sure, Mr. Riggs. In the 1996 IRP, they had an installed cost for the combustion turbines and that is what it is, and you would have to check with your people to see what was in there and what wasn't. They had a price in there for the actual machines and then a price for it installed at the Brown site.

Q. Now, Mr. Kinloch, you also cite the fact that the units being built at the Brown site is a complicating factor in your testimony; do you not?

A. Repeat that.

Q. Sure. In your testimony, you cite the fact that the combustion turbines are being built at the Brown generation station is another complicating factor; do

1           you not?

2    A.    Right.  The fact that a site that the preparation work

3           has been done and the site is ready to put in a KU

4           combustion turbine, being used by an unregulated

5           affiliate, that site is being used, yes, that's a

6           complicating factor; yes, sir.

7    Q.    You testimony further urges that a greenfield site

8           should be used in such instances; does it not?

9    A.    That's correct.

10   Q.    Isn't it true, Mr. Kinloch, that greenfield sites would

11           take 24 to 36 months more to complete and may require

12           different environmental permits than an established

13           site, such as the Brown site?

14   A.    That's correct.

15   Q.    During that period of time, if a greenfield site was

16           undertaken, customers would not have the benefit of

17           that combustion turbine while it was being constructed;

18           would they?

19   A.    They wouldn't have the use of it.  Now, the question

20           whether there's a benefit is another issue.

21   Q.    Isn't it true, Mr. Kinloch, that the Trimble County

22           Generating Station of the Louisville Gas and Electric

23           Company is another brownfield site available to the

24           companies in the future; that the Brown Generating

25           Station is not the only brownfield site available to

1 the joint applicants?

2 A. Well, I mean, the company could put turbines at a  
3 number of sites. I imagine they could probably put it  
4 at the Cane Run site. I'm sure that's always an  
5 option. The difference is that, at the Brown site, the  
6 site had already been prepared. There are already  
7 combustion turbines there. They already had a  
8 substation there specifically for use of the combustion  
9 turbines. If you go to it, like the Trimble County  
10 site, there would still have to be some preparation  
11 work. I'm not sure if there's a gas line laid  
12 specifically sized to the site that could service them.  
13 So a site like that I guess I would characterize  
14 somewhere between a greenfield site and a brownfield  
15 site, as you defined it, because it's not as ready for  
16 combustion turbines as what Brown was where they had  
17 already sited and were ready to go with combustion  
18 turbines.

19 Q. You do agree with me, though, that the joint applicants  
20 have at least one, if not more, potential brownfield  
21 sites or generating stations that would allow the  
22 construction of combustion turbines in the future?

23 A. Right, but I'm not sure that they've got all the air  
24 permits and the substations and gas lines ready to go  
25 at those sites.

1 Q. Mr. Kinloch, I come to the end of your testimony and  
2 read that you cannot recommend for or against the  
3 Commission granting the Certificate of Convenience and  
4 Necessity in this case, that what you do recommend is  
5 that, if the Commission grants the certificate, you  
6 have attached a condition to it that the cost of  
7 obtaining exempt wholesale generation status not be  
8 included as part of the cost of the project; is that  
9 true?  
10 A. That's right. The cost that you wouldn't have if the  
11 company had gone through the normal procedure of  
12 getting the certificate before such time they began  
13 construction.  
14 Q. And you agree with me that, under the current  
15 regulation of Kentucky, the companies could not obtain  
16 the combustion turbines in time for the summer of 1999?  
17 A. Not if you started when you did. I mean, if you had  
18 started back in, I guess, about early 1998, you could  
19 have gotten your certificate in time.  
20 Q. At that time, we did not have experience of the summer  
21 of 1998; did we?  
22 A. No, you didn't.  
23 Q. Okay. Those are all the questions I have. Thank you.  
24 A. But I might add you did have the ECAR forecast which  
25 showed that capacity was tightening up.

1 Q. Would you agree with me that the price volatility we  
2 saw in the summer of 1998 had never been experienced  
3 before?

4 A. Not on that scale; no.

5 Q. I'm . . .

6 A. No, not on that scale. You hadn't seen that before.

7 MR. RIGGS:

8 Thank you. Those are all the questions I have,  
9 Your Honor.

10 MR. RAFF:

11 If we could have just a moment, please, Your  
12 Honor.

13 OFF THE RECORD

14 MR. RAFF:

15 I have one question.

16 CROSS EXAMINATION

17 BY MR. RAFF:

18 Q. Over at Page 12 of your testimony, at the bottom, you  
19 talk about the current projected cost of the combustion  
20 turbine of \$381 versus what had been projected in KU's  
21 1996 IRP and the significant increase, and then you go  
22 on, Lines 21 through 23, to talk about other peaking  
23 options, such as battery storage and compressed air  
24 storage, are now in a similar price range. Do you see  
25 that?

1 A. Yes, sir.

2 Q. If you would turn to your Exhibit 1, please, which of  
3 the columns here talk about the battery storage and the  
4 compressed air?

5 A. If you go down to the bottom of the page, the options  
6 across the bottom, the fifth column over and the sixth  
7 column are battery storage, and the eighth column over  
8 is compressed air storage.

9 Q. It looks like "Adv Bat 3hr" and "Adv BAT 5hr"; is that  
10 the two?

11 A. Yes.

12 Q. And then you skip on, and then there's a "CAES"?

13 A. Yes.

14 Q. Okay. And then which of the costs - I mean, what  
15 numbers are reflected here as something that you would  
16 say was the equivalent for the capacity costs as  
17 expressed for the dollars per kilowatt? Is there such  
18 a cost?

19 A. It's not simply the capacity cost, Mr. Raff. These  
20 technologies that you have here are storing energy off  
21 system when power can be bought very cheap compared to  
22 the cost of running a combustion turbine which is  
23 expensive natural gas. So it's not only the fixed  
24 cost, the capacity cost, but also the variable cost  
25 that has to be looked at to get a comparison. That's

1 partly the purpose of my testimony. It's to say that  
2 all the analysis hasn't been done, and I find the  
3 Commission in a very difficult position having to make  
4 a decision considering a lot of these alternatives that  
5 have a lot lower variable cost and capital cost  
6 somewhat in the same range haven't been analyzed.

7 Q. Well, can you tell from these figures what the capital  
8 costs are?

9 A. Yes. The three-hour battery storage, it's got the  
10 total generic unit cost of I think that's \$468, the  
11 five-hour storage at \$640, and the compressed air  
12 storage at \$435.

13 Q. Okay. And the batteries, are they for 20 megawatts?  
14 Am I reading that correctly?

15 A. Let's see here. Twenty, yes, and the compressed air  
16 storage is 350.

17 Q. And this, similarly, was based on January, 1995,  
18 dollars?

19 A. That's correct.

20 MR. RAFF:

21 Thank you very much. I have no further questions.

22 HEARING OFFICER SHAPIRO:

23 Mr. Riggs?

24 MR. RIGGS:

25 Brief. One question.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Well, wait, wait. Ms. Blackford, do you have any redirect?

MS. BLACKFORD:

No.

HEARING OFFICER SHAPIRO:

Okay.

MR. RIGGS:

May I be permitted one question, Your Honor?

HEARING OFFICER SHAPIRO:

Yeah.

RECROSS EXAMINATION

BY MR. RIGGS:

Q. Mr. Kinloch, on the Exhibit 6(a) from the KU IRP that you have attached to your testimony as Exhibit DHBK-1, the developmental rating of the batteries, the technical developmental rating for the two battery scenarios, is indicated as being pilot; is that not right?

A. That's correct, and the compressed air storage is commercial actual numbers from the project, I believe, in Alabama.

MR. RIGGS:

Thank you. That's all the questions I have.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Okay. Thank you, Mr. Kinloch.

A. Thank you.

HEARING OFFICER SHAPIRO:

Does that conclude the case?

MS. BLACKFORD:

Yes.

HEARING OFFICER SHAPIRO:

There was a procedural Order in here, but I don't believe it had anything in it - it doesn't provide for filing of briefs; does it? Do the parties wish to file briefs?

MS. BLACKFORD:

No.

MR. RIGGS:

Yes, we do, Your Honor.

HEARING OFFICER SHAPIRO:

One does. Do you wish to file a brief?

MR. RAFF:

She indicated no. So do you want to reconsider or . . .

MR. RIGGS:

We are interested in filing a brief. We do not ask for much time, and we do not anticipate . . .

1 HEARING OFFICER SHAPIRO:  
2 Okay. How much time do you need?  
3 MR. RIGGS:  
4 Pardon?  
5 HEARING OFFICER SHAPIRO:  
6 How much time do you need?  
7 MR. RIGGS:  
8 June 10. We can limit the page limit if you want  
9 to.  
10 MS. BLACKFORD:  
11 Go right ahead.  
12 MR. RIGGS:  
13 Okay.  
14 MS. BLACKFORD:  
15 I indicated I'm not interested in filing one.  
16 HEARING OFFICER SHAPIRO:  
17 Oh, you're not going to file one anyway?  
18 MS. BLACKFORD:  
19 No.  
20 HEARING OFFICER SHAPIRO:  
21 You're not going to file a brief, . . .  
22 MS. BLACKFORD:  
23 No.  
24 HEARING OFFICER SHAPIRO:  
25 . . . or do you just want to leave the option

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

open?

MS. BLACKFORD:

I'll leave the option open.

HEARING OFFICER SHAPIRO:

Okay. Will June 10, then, be acceptable to you?

Okay. The briefs will be due, then, June 10, if either party wishes to file them. Anything else that needs to come before the Commission?

MR. RAFF:

We need a date. We had asked for a couple of items. Maybe June 10, also.

MR. RIGGS:

Or sooner, yes.

HEARING OFFICER SHAPIRO:

Well, we'll probably need them sooner because, if Ms. Blackford wants to file a brief, she'll probably need that information as well.

MS. BLACKFORD:

Well, I would probably need a date for brief filing that would include a transcript were I to file one.

HEARING OFFICER SHAPIRO:

Well, the transcript will be filed the . . .

MR. RIGGS:

Your Honor, I . . .

1 HEARING OFFICER SHAPIRO:  
2 Well, it wouldn't take you that long to get that  
3 information.  
4 MR. RIGGS:  
5 No, sir. I think we could file our information by  
6 this Friday.  
7 HEARING OFFICER SHAPIRO:  
8 Okay. That should be enough time. Okay. What  
9 date is that? That's the 3rd?  
10 MR. RIGGS:  
11 That would be June 4.  
12 HEARING OFFICER SHAPIRO:  
13 June 4?  
14 MR. RIGGS:  
15 Yes, sir.  
16 HEARING OFFICER SHAPIRO:  
17 Okay. And the briefs will be due the following  
18 week.  
19 MR. RIGGS:  
20 Yes, June 10.  
21 HEARING OFFICER SHAPIRO:  
22 Let's make it June 11. That will be on a Friday.  
23 MR. RIGGS:  
24 Okay.  
25

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Okay. Anything else?

MR. RIGGS:

Nothing, Your Honor.

HEARING OFFICER SHAPIRO:

Okay. The hearing is adjourned.

MR. RIGGS:

Thank you, Your Honor.

FURTHER THE WITNESSES SAITH NOT  
HEARING ADJOURNED  
OFF THE RECORD

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

STATE OF KENTUCKY  
COUNTY OF FRANKLIN

I, Connie Sewell, the undersigned Notary Public, in and for the State of Kentucky at Large, do hereby certify the foregoing transcript is a complete and accurate transcript, to the best of my ability, of the hearing taken down by me in this matter, as styled on the first page of this transcript; that said hearing was first taken down by me in shorthand and mechanically recorded and later transcribed under my supervision; that the witnesses were first duly sworn before testifying.

My commission will expire November 19, 2001.

Given under my hand at Frankfort, Kentucky, this the 15th day of June, 1999.

Connie Sewell  
Connie Sewell, Notary Public  
State of Kentucky at Large  
1705 South Benson Road  
Frankfort, Kentucky 40601  
Phone: (502) 875-4272



101 Consumer Lane Frankfort, KY 40601  
(502) 223-8821 FAX (502) 875-2624  
David T. Thompson - Executive Director  
dthompson@kypress.com  
Gloria Davis - Director of Sales  
gdavis@kypress.com  
Website: www.kypress.com

**NOTARIZED PROOF OF PUBLICATION**

**STATE OF KENTUCKY**

**COUNTY OF** Franklin

Before me, a Notary Public, in and for said County and State, this 24th day of May, 1999, came Gloria Davis

personally known to me, who being duly sworn, states as follows:

That she is Director of Sales of the Kentucky Press Service, and that the following publication See Attached List

ran the Kentucky Utilities Notice of Public Hearing the week of May 17.

Gloria Davis  
Gloria Davis, Director of Sales

Bonnie J. Howard  
Notary Public

My commission expires 9-18-2000

# KENTUCKY PRESS SERVICE

101 Consumer Lane  
(502) 223-8821

Frankfort, KY 40601  
FAX (502) 875-2624

*Gloria Davis, Ad Director*

May 13, 1999

List of newspapers running the Notice to Kentucky Utilities Company Customers. Attached tearsheets provide proof of publication:

Barbourville Mountain Advocate  
Bardstown Kentucky Standard  
Beattyville Enterprise  
Beaver Dam Ohio County Messenger  
Bedford Trimble Banner Democrat  
Berea Citizen  
Brooksville Bracken County News  
Brownsville Edmonson News  
Calhoun McLean County News  
Campbellsville Central KY News Journal  
Carlisle Mercury  
Carrollton News Democrat  
Cave City Barren County Progress  
Central City Times Argus  
Clinton Hickman County Gazette  
Columbia Adair Progress  
Columbia News  
Corbin Times Tribune  
Cumberland Tri City News  
Cynthiana Democrat  
Danville Advocate Messenger  
Danville Lincoln Ledger  
Dawson Springs Progress  
Eddyville Herald Ledger  
Elizabethtown Hardin Co. Independent  
Elizabethtown News Enterprise  
Falmouth Outlook  
Flemingsburg Gazette  
Flemingsburg Shopper  
Frankfort State Journal  
Fulton Leader  
Georgetown News  
Glasgow Daily Times  
Glasgow Republican  
Greensburg Record Herald

Greenville Leader News  
Harlan Daily Enterprise  
Harrodsburg Herald  
Hartford Ohio County Times News  
Henderson Gleaner  
Hodgenville Larue County Herald News  
Hopkinsville KY New Era  
Irvine Citizen Voice & Times  
LaGrange Oldham Era  
Lancaster Central Record  
Lancaster Garrard County News  
Lawrenceburg Anderson News  
Lebanon Enterprise  
Leitchfield Grayson Co. News Gazette  
Lexington Herald Leader  
Liberty Casey County News  
London Sentinel Echo  
Louisville Courier Journal  
Madisonville Messenger  
Manchester Enterprise  
Marion Crittenden Press  
Maysville Ledger Independent  
Middlesboro Daily News  
Morehead News  
Morganfield Union County Advocate  
Mt. Sterling Advocate  
Mt. Vernon Signal  
Munfordville Hart County News Herald  
New Castle Henry County Local  
Nicholasville Jessamine Journal  
Owensboro Messenger Inquirer  
Owenton News Herald  
Owingsville Bath County News Outlook  
Paducah Sun  
Paris Bourbon County Citizen  
Paris Bourbon Times  
Pineville Sun  
Princeton Times Leader  
Providence Journal Enterprise  
Somerset Pulaski News Journal

Page 2

Radcliff Sentinel  
Richmond Register  
Russell Springs Russell County News  
Russell Springs Times Journal  
Sebree Banner  
Shelbyville Sentinel News  
Shephersville Pioneer News  
Smithland Livingston Ledger  
Somerset Commonwealth Journal  
Springfield Sun  
Stanford Interior Journal  
Sturgis News  
Taylorsville Spencer Magnet  
Beattyville Three Forks Tradition  
Versailles Woodford Sun  
Warsaw Gallatin County News  
Whitley City McCreary County Record  
Wickliffe Advance Yeoman  
Williamsburg News Journal  
Williamstown Grant County News  
Winchester Sun

THE COURIER JOURNAL and LOUISVILLE TIMES  
Incorporated

STATE of KENTUCKY  
County of Jefferson

Affidavit of Publication

I, Judy Reece  
of THE COURIER-JOURNAL AND LOUISVILLE TIMES COMPANY, publisher  
of The COURIER-JOURNAL, a newspaper of general circulation  
printed and published at Louisville, Kentucky, do solemnly swear  
that from my own personal knowledge, and reference to the files  
of said publication, the advertisement of

LEGAL 105 PUBLIC HEARING

was inserted in THE COURIER-JOURNAL as follows:

Date	Lines	Date	Lines
05/18/1999	106		
-----		-----	
-----		-----	
-----		-----	
-----		-----	
-----		-----	
-----		-----	
-----		-----	
-----		-----	

*Judy Reece*

-----  
(Signature of person making proof)

Subscribed and sworn to before me this 25 day of May, 1999.

My commission expires May 25, 2002.

*Jerri Allison*

-----  
Jerri Allison (Notary Public)

**NOTICE OF PUBLIC HEARING**

On February 11, 1999, Louisville Gas and Electric Company (LG&E) and Kentucky Utilities Company (KU) filed with the Public Service Commission of Kentucky a joint Application for a Certificate of Public Convenience and Necessity for the Acquisition of Two 164 Megawatt Combustion Turbines (Case No. 99-056). The Commission will hold a hearing on June 1, 1999 at 9:00 a.m., Eastern Daylight Time, in Hearing Room 1 of the Commission's offices located at 730 Schenkel Lane, Frankfort, Kentucky, for the purpose of cross-examining witnesses of LG&E, KU, and intervenors in the case.

**LOUISVILLE GAS AND  
ELECTRIC COMPANY  
220 West Main Street  
Louisville, Kentucky**

THE COURIER JOURNAL and LOUISVILLE TIMES  
Incorporated

STATE of KENTUCKY  
County of Jefferson

Affidavit of Publication

I, Judy Reece  
of THE COURIER-JOURNAL AND LOUISVILLE TIMES COMPANY, publisher  
of The COURIER-JOURNAL, a newspaper of general circulation  
printed and published at Louisville, Kentucky, do solemnly swear  
that from my own personal knowledge, and reference to the files  
of said publication, the advertisement of

LEGAL 105 PUBLIC HEARING

was inserted in THE COURIER-JOURNAL as follows:

Date	Lines	Date	Lines
05/18/1999	106		
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----

*Judy Reece*

-----  
(Signature of person making proof)

Subscribed and sworn to before me this 25 day of May, 1999.

My commission expires May 25, 2002.

*Jerri Allison*

-----  
Jerri Allison (Notary Public)

**NOTICE OF PUBLIC HEARING**

On February 11, 1999, Louisville Gas and Electric Company (LG&E) and Kentucky Utilities Company (KU) filed with the Public Service Commission of Kentucky a joint Application for a Certificate of Public Convenience and Necessity for the Acquisition of Two 164 Megawatt Combustion Turbines (Case No. 99-056). The Commission will hold a hearing on June 1, 1999 at 9:00 a.m., Eastern Daylight Time, in Hearing Room 1 of the Commission's offices located at 730 Schenkel Lane, Frankfort, Kentucky, for the purpose of cross-examining witnesses of LG&E, KU, and intervenors in the case.

**LOUISVILLE GAS AND  
ELECTRIC COMPANY  
220 West Main Street  
Louisville, Kentucky**

THE COURIER JOURNAL and LOUISVILLE TIMES  
Incorporated

STATE of KENTUCKY  
County of Jefferson

Affidavit of Publication

I, Judy Reece  
of THE COURIER-JOURNAL AND LOUISVILLE TIMES COMPANY, publisher  
of The COURIER-JOURNAL, a newspaper of general circulation  
printed and published at Louisville, Kentucky, do solemnly swear  
that from my own personal knowledge, and reference to the files  
of said publication, the advertisement of

LEGAL 105 PUBLIC HEARING

was inserted in THE COURIER-JOURNAL as follows:

Date	Lines	Date	Lines
05/18/1999	106		
-----		-----	
-----		-----	
-----		-----	
-----		-----	
-----		-----	
-----		-----	
-----		-----	

*Judy Reece*

-----  
(Signature of person making proof)

Subscribed and sworn to before me this 25 day of May, 1999.

My commission expires May 25, 2002.

*Jerri Allison*

-----  
Jerri Allison (Notary Public)

**NOTICE OF PUBLIC HEARING**

On February 11, 1999, Louisville Gas and Electric Company (LG&E) and Kentucky Utilities Company (KU) filed with the Public Service Commission of Kentucky a joint Application for a Certificate of Public Convenience and Necessity for the Acquisition of Two 164 Megawatt Combustion Turbines (Case No. 99-056). The Commission will hold a hearing on June 1, 1999 at 9:00 a.m., Eastern Daylight Time, in Hearing Room 1 of the Commission's offices located at 730 Schenkel Lane, Frankfort, Kentucky, for the purpose of cross-examining witnesses of LG&E, KU, and intervenors in the case.

**LOUISVILLE GAS AND  
ELECTRIC COMPANY  
220 West Main Street  
Louisville, Kentucky**

**LG&E Energy Corp.**  
220 West Main Street  
P.O. Box 32030  
Louisville, Kentucky 40232



**Mr. Kendrick R. Riggs**  
Ogden Newell & Welch  
1700 Citizens Plaza  
500 West Jefferson Street  
Louisville, KY 40202-2874

*Applicant Exhibits*

FILED

JUN 15 1999

PUBLIC SERVICE  
COMMISSION

**CASE**

**NUMBER:**

99-056



**Ronald L. (Ron) Willhite**  
Vice President - Regulatory Affairs

**LG&E Energy Corp.**  
220 West Main Street  
P.O. Box 32030  
Louisville, Kentucky 40232  
502-627-2044  
502-627-2585 FAX

April 1, 1999

Helen C. Helton, Executive Director  
Public Service Commission of Kentucky  
730 Schenkel Lane  
P. O. Box 615  
Frankfort, Kentucky 40602

NOISSIWVOC  
COMMISSION  
PUBLIC SERVICE  
APR 01 1999  
RECEIVED

**RE: In the Matter of: APPLICATION OF LOUISVILLE GAS AND  
ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY  
FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY  
FOR THE ACQUISITION OF TWO 164 MEGAWATT COMBUSTION  
TURBINES, Case No. 99-056**

Dear Ms. Helton:

Please find enclosed and accept for filing the original and ten copies of LG&E's and KU's Response to Information Requested in Commission Orders dated March 16 and 19, 1999, as well as a Motion to Amend the original Application, the Amended Application, and the Revised Testimony of Ronald L. Willhite.

Further enclosed is a Petition for Confidential Protection of certain documents provided in response to Data Request Nos. 17 and 23. Three copies of this information are provided under seal marked Confidential and Proprietary. Please place the confidential documents in a secure file and protect their contents from public disclosure pending a ruling on the Petition for Confidential Protection.

Yours very truly,

Ronald L. Willhite  
Vice President  
Regulatory Affairs

cc: Parties of Record

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

RECEIVED  
APR 01 1999  
PUBLIC SERVICE  
COMMISSION

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND )  
ELECTRIC COMPANY AND KENTUCKY )  
UTILITIES COMPANY FOR A CERTIFICATE )  
OF PUBLIC CONVENIENCE AND NECESSITY )  
FOR THE ACQUISITION OF TWO 164 )  
MEGAWATT COMBUSTION TURBINES )

CASE NO. 99-056

RESPONSE TO COMMISSION ORDERS

DATED MARCH 16 AND 19, 1999

*original*

FILED: APRIL 1, 1999

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-1**

Responding Witness: Ronald L. Willhite

Q-1. Refer to Mr. Willhite's testimony, p. 7, lines 8-7. On what date did LG&E and KU determine that the acquisition of the combustion turbines is the best generation resource to meet their combined needs? Provide copies of all internal memoranda, letters, notes, board minutes or other writings which document that date.

A-1. On February 2, 1999, the Operating Committee for LG&E and KU (collectively the Companies) met and determined that the CTs were the best generation resource to meet the Companies' combined needs. The Committee formally approved the Companies' purchase of the CTs from LG&E Capital Corp. on that date. The Committee's determination was the result of several months' evaluation of the CTs by both LG&E Capital Corp. and the Companies, a process that began in the summer of 1998.

As a result of the volatility in the wholesale power market in June and July of 1998, as described in the testimony of James Kasey, LG&E and KU determined that their plans to rely on purchased power to meet incremental margin needs in 1999 should be revisited. Thus, in July of 1998, LG&E and KU began discussions with Black & Veatch as to the availability of combustion turbines (CTs) that could be placed in service by summer 1999. In late August, LG&E and KU received a CT acquisition proposal from ABB. Based on that data, LG&E and KU performed a limited and preliminary revenue requirements analysis which indicated that the CTs would likely be the least-cost alternative for meeting the combined needs of KU and LG&E. However, the time constraints involved with obtaining regulatory approval of the project prevented immediate action on behalf of LG&E and KU.

In September, LG&E Energy Corp. conducted its evaluation of the acquisition of the CTs. The analysis concluded that the CTs were an economically viable acquisition. Based on that conclusion, and to prevent the loss of this acquisition opportunity, LG&E Energy Corp. management took the proactive step of having LG&E Capital Corp. enter into the option agreement with ABB to acquire the CTs.

Subsequently, LG&E and KU performed a detailed and comprehensive revenue-requirements analysis. At the same time, LG&E Capital Corp. undertook an evaluation of the CTs. LG&E's and KU's revenue requirements analysis, which

ITEM NO. PSC-1  
PAGE 1 OF 6  
WITNESS Willhite

was completed in December 1998 and updated in January 1999, has been submitted with the present Application. This analysis demonstrated that the CTs were the least-cost way for the Companies to acquire additional generation resources to help meet their capacity needs. Based on the analyses that had been done by LG&E and KU, the Operating Committee for the Companies met on February 2, 1999 and approved KU's and LG&E's acquisition of the CTs from LG&E Capital Corp. The minutes of the February 2, 1999 meeting are attached to this response.

ITEM NO. PSC-1  
PAGE 2 OF 6  
WITNESS Willhite

**Minutes of Operating Committee Meeting  
February 2, 1999**

Attendees: Members – Wayne Lucas (Chairperson), Steve Wood (LG&E), Chris Hermann (LG&E), Bob Hewitt (KU) [proxy], and Jim Ellington (KU).  
Advisors - Martyn Gallus and Lonnie Bellar.

Subjects: Approval of Combustion Turbine project at E.W.Brown Station and associated Joint Unit ownership shares.

Discussion of RFPs for purchase power and CT construction.

Meeting Summary:

Lonnie Bellar, Manager Generation Systems Planning, summarized the resource assessment which determined that the two ABB GT24 simple-cycle combustion turbines being constructed at the E. W. Brown generation station are the least cost capacity resource for LG&E and KU to meet their respective margin requirements. Martyn Gallus, Vice President of Energy Marketing, discussed the volatility of the wholesale power market and its implications to this analysis. He supported the purchase power assumptions used in the analysis as being representative of the current market. A memo requesting approval of the CTs as a least cost resource and the recommendation to transfer the assets to LG&E and KU was reviewed. Also, outlined in the memo was the recommended ratio share ownership of the CTs, 38% LG&E and 62% KU. It was discussed that per the Power System Supply Agreement (PSSA) schedule A, the committee is required to approve the participation of each utility in jointly owned units. The committee then voted in favor four to zero to transfer the CTs to LG&E and KU in the ratio share of 38% and 62%, respectively. The committee was informed that pending their approval, a CCN requesting the transfer of the CTs to the utilities had been prepared and would be filed as soon a practical.

Further discussion centered on the upcoming RFP for purchase power and RFP for CTs. The committee was informed of the intent to issue these requests and told they would be apprised of the results of the RFPs at a future meeting.

The meeting was adjourned.

ITEM NO. PSC-1  
PAGE 3 OF 6  
WITNESS Willhite

# •Memo

**To:** Wayne Lucas, Bob Hewett, Steve Wood, Jim Ellington, Chris Hermann  
**From:** Lonnie Bellar  
**CC:** Jeff Whitaker, John Wolfram  
**Date:** 02/02/99  
**Re:** Ratio Share for CT Cost Allocation

---

As you know, Generation Systems Planning is in the process of completing our Resource Assessment for the new CTs at Brown. Our preliminary studies first completed in November 1998 indicated that the CTs are the least cost alternative for meeting the joint companies' capacity needs for 1999 and into the future. According to definitions in the PSSA, the new CTs are considered "Joint Units." Schedule A of the PSSA states that "ownership shares in each joint unit shall be allocated by the Operating Committee" and that "each company shall be responsible for its pro-rata share of the costs of construction" of such unit(s).

Generation Systems Planning recommends that the Operating Committee formally approve the purchase of the CTs from LG&E Capital Corporation, and use the ratio of 62% KU and 38% LG&E for determining ownership shares of the new CTs. This ratio is based on the results of our most recent evaluation of the Summer 1999 reserve margin requirements, and is consistent with the principles outlined in the PSSA.

Our studies indicate that the following additional capacity is required to meet the 14% joint-company target reserve margin for Summer 1999:

KU	292 MW	62%
LG&E	178 MW	38%
TOTAL	470 MW	100%

The attached spreadsheet includes details of the numerical analysis. The analysis includes forecast supply capabilities, peak loads, interruptible loads, and peak diversity share; the analysis excludes Paris and SEPA.

The attached summary of combined LG&E and KU reserve margin data summarizes the long-term capacity needs required to maintain the 14% target reserve margin. The capacity needs determined herein--and the acquisition of the new CTs to mitigate those needs--are consistent with the resource plans that existed before the merger.

In our Resource Assessment study, we used a 60/40 ratio for the Net Present Value of Revenue Requirements analysis. The 60/40 ratio was based on our preliminary calculation of 1999 reserve margin needs. We have since refined that analysis, resulting in the recommended 62/38 ratio; the change in ratio has no significant impact on the results of the NPVRR evaluation.

ITEM NO. PSC-1  
PAGE 4 OF 6  
WITNESS Willhite

# Kentucky Utilities Company/Louisville Gas and Electric Company

1999 Load/Resource Data: Brown CT Allocation Ratio

	Kentucky Utilities		Louisville Gas & Electric	Total System
Supply Capability (MW)	3,572		2,559	6,131
Firm Purchases	389		0	
SEPA	0		0	
<b>Total Capability</b>	<b>3,961</b>		<b>2,559</b>	<b>6,520</b>
Peak Load (MW)	3,761		2,532	
	3	Cohart	3	
	0	Phillip Morris	18	
	3	Kosmos Cement	19	
	4	Ford Truck	30	
	1	General Electric	8	
	1	Carbide Graphite	45	
	0	Kentucky Forge	0	
	1	Ford Fern Valley	0	
	5			
	0			
Total CSR and Paris	18		123	
Net Peak (MW)	3,743		2,409	
Share of Diversity (0.32%)	12		8	
<b>System Peak Contribution (MW)</b>	<b>3,731</b>		<b>2,401</b>	<b>6,132</b>
MW Margin	230		158	388
Reserve Margin %	6.16%		6.57%	6.33%
<b>MW need for 14% Margin</b>	<b>292</b>		<b>178</b>	<b>470</b>
<b>Ratioed Share</b>	<b>62.1%</b>		<b>37.9%</b>	<b>100.0%</b>

Note:  
Effects of curtailable loads, interruptible loads and Paris are based on historical averages provided by load forecasting.  
Actual effect at the time of 1999 system peak may be slightly more/less.

ITEM NO. PSC-1  
PAGE 5 OF 6  
WITNESS Willhite

# KU and LG&E Joint Company Loads, Capabilities, and Reserves

02-Feb-99  
Joint Company at 14% Reserve Margin and 0.3% Load Diversity

Year	Season	Generating Capacity (MW)	Purchase (MW)					Net Capability (MW)	Net Forecast Peak Load (MW)	Reserves (MW)	Reserves (%)	Capacity Margin (%)	Unit Addition
			OMU	EEL	CIN	Call	Pking						
1998	S	6131	194	200	110	50	95	6780	5946	834	14.0%	12.3%	
1998/99	W	6202	194	200	110	0	0	6706	5397	1309	24.3%	19.5%	w/o Pking Purch: 12.4%
1999	S	6459	189	200	0	0	140	6988	6132	856	14.0%	12.3%	Brown 7, Brown 6 328 / 362 MW 08/01/99
1999/0	W	6564	189	200	0	0	0	6953	5518	1435	26.0%	20.6%	w/o Pking Purch: 11.7%
2000	S	6459	187	200	0	0	350	7196	6313	883	14.0%	12.3%	
2000/1	W	6564	187	200	0	0	0	6951	5630	1321	23.5%	19.0%	w/o Pking Purch: 8.4%
2001	S	6459	183	200	0	0	485	7327	6427	900	14.0%	12.3%	
2001/2	W	6564	183	200	0	0	0	6947	5752	1195	20.8%	17.2%	w/o Pking Purch: 6.3%
2002	S	6729	177	200	0	0	365	7471	6552	919	14.0%	12.3%	Brown 5, CCPH1 270 / 318 MW 06/01/02
2002/3	W	6882	177	200	0	0	0	7259	5881	1378	23.4%	19.0%	Reserve Margin w/o unit: 9.9% w/o Pking Purch: 8.3%
2003	S	6895	171	200	0	0	360	7626	6689	937	14.0%	12.3%	CCPH2 150 / 180 MW 06/01/03
2003/4	W	7078	171	200	0	0	0	7449	6026	1423	23.6%	19.1%	Reserve Margin w/o unit: 11.8% w/o Pking Purch: 8.6%
2004	S	7195	166	200	0	0	245	7806	6849	957	14.0%	12.3%	HRSG #1, CCPH1 300 / 331 MW 06/01/04
2004/5	W	7409	166	200	0	0	0	7775	6154	1621	26.3%	20.9%	Reserve Margin w/o unit: 9.6% w/o Pking Purch: 10.4%
2005	S	7495	160	200	0	0	120	7975	6995	980	14.0%	12.3%	CCPH2, HRSG #2 300 / 331 MW 06/01/05
2005/6	W	7740	160	200	0	0	0	8100	6274	1826	29.1%	22.5%	Reserve Margin w/o unit: 9.7% w/o Pking Purch: 12.3%
2006	S	7633	153	200	0	0	140	8126	7127	999	14.0%	12.3%	CCPH1 150 / 180 06/01/06
2006/7	W	7908	153	200	0	0	0	8261	6386	1875	29.4%	22.7%	Reserve Margin w/o unit: 11.9% w/o Pking Purch: 12.1%
2007	S	7933	148	200	0	0	0	8281	7258	1023	14.1%	12.4%	CCPH2, HRSG #3 300 / 331 MW 06/01/07
2007/8	W	8239	148	200	0	0	0	8587	6517	2070	31.8%	24.1%	Reserve Margin w/o unit: 10.0% w/o Pking Purch: 14.1%
2008	S	8083	144	200	0	0	0	8427	7391	1036	14.0%	12.3%	CCPH1 150 / 180 MW 06/01/08
2008/9	W	8419	144	200	0	0	0	8763	6652	2111	31.7%	24.1%	Reserve Margin w/o unit: 12.0% w/o Pking Purch: 14.0%
2009	S	8233	140	200	0	0	15	8588	7534	1054	14.0%	12.3%	CCPH2 150 / 180 06/01/09
2009/10	W	8599	140	200	0	0	0	8939	6793	2146	31.6%	24.0%	Reserve Margin w/o unit: 12.0% w/o Pking Purch: 13.8%
2010	S	8383	136	200	0	0	55	8774	7696	1078	14.0%	12.3%	HRSG #4 150 / 151 06/01/10
2010/11	W	8750	136	200	0	0	0	9086	6905	2181	31.6%	24.0%	Reserve Margin w/o unit: 12.1% w/o Pking Purch: 13.3%
2011	S	8683	132	200	0	0	0	9015	7852	1163	14.8%	12.9%	CCPH1, CCPH2 300 / 360 06/01/11
2011/12	W	9110	132	200	0	0	0	9442	7021	2421	34.5%	25.6%	Reserve Margin w/o unit: 11.0% w/o Pking Purch: 14.8%
2012	S	8833	127	200	0	0	0	9160	7970	1190	14.9%	13.0%	HRSG #5 150 / 151 06/01/12
													Reserve Margin w/o unit: 13.1% w/o Pking Purch: 14.9%
													<b>Total Cap Installed 2698 / 3055</b>

ITEM NO. PSC-1  
PAGE 6 OF           
WITNESS Willhite

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request March 16&19, 1999

**Question: PSC-2**

Responding Witness: Ronald L. Willhite

Q-2. Refer to Mr. Willhite's testimony, p. 7, lines 3-8.

- a) On what date did LG&E Capital Corporation sign a contract with ABB to purchase the turbine units?
- b) On what date did LG&E Capital Corporation sign a purchase option with ABB?

A-2.

- a) LG&E Capital Corporation signed a contract with ABB to purchase the turbine units on November 2, 1998.
- b) LG&E Capital Corporation signed a purchase option agreement with ABB on October 2, 1998.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-3**

Responding Witness: Ronald L. Willhite

Q-3. Who owns the land on which the turbines are now being constructed? If KU owns the land, has this land previously been included in KU's rate base?

A-3. KU owns the land where the turbines are being constructed. KU purchased the land for the original Brown Units 1-3 over a period of time from 1958 to 1976, for an original cost of \$143,011. This cost was included in the rate base in KU's last rate case. KU purchased additional acreage at Brown for \$99,003 in 1996. The cost of this additional acreage has yet to be included in the rate base.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-4**

Responding Witness: Ronald L. Willhite

- Q-4. Provide a copy of the deed, lease agreement, or other written document that authorizes LG&E Capital to construct the turbines at the E.W. Brown Generating Station.
- A-4. Because the Companies intend for LG&E and KU to own and operate the turbines upon receipt of Commission approval for a Certificate of Convenience and Necessity in this proceeding, they have not required any such agreement with LG&E Capital at this time. Should the Commission determine not to grant a Certificate, KU will then enter into appropriate agreements consistent with the Corporate Policies and Guidelines for Intercompany Transactions that document LG&E Capital's rights with regard to the turbines.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-5

Responding Witness: Ronald L. Willhite

Q-5. Provide a copy of Mr. Willhite's October 30, 1998 letter to the Commission as referenced in Mr. Willhite's testimony at p. 7, lines 6-8.

A-5. A copy of the October 30, 1998 letter is attached to this response.

ITEM NO. PSC-5  
PAGE 1 OF 4  
WITNESS Willhite

**Ronald L. (Ron) Willhite**  
Vice President - Regulatory Affairs

**LG&E Energy Corp.**  
220 West Main Street  
P.O. Box 32030  
Louisville, Kentucky 40232  
502-627-2044  
502-627-2585 FAX

October 30, 1998

Helen C. Helton  
Executive Director  
Kentucky Public Service Commission  
730 Schenkel Lane  
P.O. Box 615  
Frankfort, KY 40602-0615

**RE: Acquisition of Combustion Turbines by LG&E Capital Corp.**

Dear Ms. Helton:

I am writing to advise that LG&E Energy Corp.'s affiliate LG&E Capital Corp. has signed an option with Asea Brown Boveri ("ABB") to purchase two 160 Megawatt GT24a simple-cycle combustion turbine units and expects to enter into a contract to purchase the same in the near future.

LG&E Energy Corp. is in the process of evaluating whether these machines should be utilized as an additional generating resource to meet the reserve margin needs of Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") beginning in the summer of 1999, and expects to make that decision shortly.

In the event we determine that the two combustion turbines are the best generation resource to meet the needs of LG&E and KU, we will promptly notify you of that decision; and it would be our intention to file an application for a certificate of convenience and necessity and a certificate of environmental compatibility with the Commission within 30 days or thereafter.

LG&E Capital Corp. and Black & Veatch expect to enter into a construction contract in the near future for the construction and installation of the two combustion turbines at the E.W. Brown Combustion Turbine site in Central, Kentucky. Construction will start during the fourth quarter so that the machines will be available for commercial operation in August 1999. The construction of the machines will be performed in large measure by independent contractors under the direction of the general contractor, Black & Veatch.

FILE NO. PSC-5  
PAGE 2 OF 4  
WITNESS Willhite

Helen C. Helton  
October 30, 1998  
Page 2

The transactions between LG&E Capital Corp. and ABB or Black & Veatch will not result in an adverse impact on LG&E or KU or the customers of LG&E or KU and will not cause LG&E and KU to be exposed to any financial penalties if the option or purchase contract with ABB or the construction contract with Black & Veatch is canceled or the project is otherwise delayed or canceled.

KU or LG&E involvement in the project will be limited to providing oversight during the construction and installation of the combustion turbines and will be performed pursuant to a service agreement that is consistent with LG&E Energy Corp.'s Corporate Policies and Guidelines for InterCompany Transactions. KU and LG&E Capital Corp. expect to enter into this agreement following the decision on the use of the machines.

The transactions between LG&E Capital Corp. and ABB or Black & Veatch also will allow LG&E and KU the opportunity to evaluate the potential use of the combustion turbines at a time when the demand for this type of equipment exceeds the supply for the next several years.

If the Commission grants the certificates that may be requested by LG&E and KU, LG&E Capital Corp. would transfer title of ownership of the machines to LG&E and KU at cost and in compliance with LG&E Energy Corp.'s Corporate Policies and Guidelines for InterCompany Transactions. LG&E and KU thereafter would own the two machines as a joint system generation asset to meet the load requirements of their system customers pursuant to FERC Rate Schedule No. 1. KU would operate and maintain the combustion turbines in accordance with LG&E Energy Corp.'s Corporate Policies and Guidelines for InterCompany Transactions.

If the Commission does not grant the certificates that may be requested by LG&E and KU, LG&E Capital Corp. would continue to own the two machines and KU would operate and maintain them pursuant to the service agreement and consistent with LG&E Energy Corp.'s Corporate Policies and Guidelines for InterCompany Transactions. LG&E Capital Corp. or a non-utility affiliate would use the two machines for its own business plans as an Exempt Wholesale Generator under the Federal Power Act. Under the companies' current FERC tariff, LG&E and KU would not be able to purchase power generated from these two machines through any LG&E Energy Corp. affiliate, and no LG&E Energy Corp. affiliate would sell power generated from these two machines to LG&E or KU.

ITEM NO. PSC-5  
PAGE 3 OF 4  
WITNESS Willhite

Helen C. Helton  
October 30, 1998  
Page 3

Should you or the Attorney General have any questions concerning this letter or need any additional information, please contact me at your convenience.

Yours very truly,

*Ronald L. Willhite*

Ronald L. Willhite

RLW/md

cc: Hon. Elizabeth E. Blackford  
Assistant Attorney General  
Office for Rate Intervention  
124 Capital Center Drive  
Frankfort, KY 40602

0138445.03

ITEM NO. PSC-5  
PAGE 4 OF 4  
WITNESS Willhite

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-6**

Responding Witness: Ronald L. Willhite

Q-6. Mr. Willhite's October 30, 1998 letter to the Commission states, in the third paragraph, that if the turbines are determined to be the best generation resources for LG&E and KU, a certificate of environmental compatibility will be filed with the Commission.

- a) What was basis for this statement by Mr. Willhite?
- b) Did Mr. Willhite consult with anyone on this subject prior to sending this letter? If yes, provide the names of the individuals consulted and the information provided by each.
- c) Was Mr. Willhite's October 30, 1998 letter seen by anyone prior to it being sent? If yes, provide the names and titles of each person who saw it.

A-6.

- a) At the time of the October 30, 1998 letter, LG&E's and KU's intent was to provide the Commission with a general notice that the Companies could file for a CCN to acquire two additional combustion turbines at the E. W. Brown site. The Companies had not made an independent determination at that time regarding the need to apply for a Certificate of Environmental Compatibility (CEC). However, as a CCN application typically requires a CEC, the Companies were providing a general notice of their intention to request any approvals that might be required from the Commission.
- b) and c) The October 30, 1998 letter was reviewed by counsel as well as members of the Finance, Generation Planning and Regulatory departments of the Companies.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-7**

**Responding Witness: Ronald L. Willhite**

- Q-7. Mr. Willhite's testimony, at p. 12, lines 13-22, states that a certificate of environmental compatibility is not being requested because the Commission granted such a certificate in 1991 for the entire Brown site.
- a) When did Mr. Willhite first become aware that the pending application would not include a request for a certificate of environmental compatibility?
  - b) When did Mr. Willhite first become aware that the Commission had already granted a certificate of environmental compatibility in 1991 for the entire Brown site?
- A-7. a) and b) After further review, LG&E and KU have determined to request leave from the Commission to amend their application and to request a Certificate of Environmental Compatibility. Please see the Motion to Amend, the Amended Application and revised Testimony of Ronald L. Willhite, which will be filed with the Commission on April 1, 1999.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-8**

Responding Witness: Ronald L. Willhite

- Q-8. Refer to Mr. Willhite's testimony, p. 12, lines 21-22. Exactly where in the pending application is "[t]his information, and the 1991 Certificate" which is referenced as being submitted with the application?
- A-8. Please see the response to Question 7.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-9**

Responding Witness: Ronald L. Willhite

Q-9. Is Mr. Willhite's conclusion that the Commission issued a certificate of environmental compatibility in 1991 for the entire Brown site based on something in the Commission's January 31, 1992 Order in Case No. 91-115?\* If yes, reference the specific provision granting a certificate of environmental compatibility for the entire Brown site. If no, explain in detail the basis for Mr. Willhite's conclusion.

\*Case No. 91-115, The Application Of Kentucky Utilities Company For a Certificate of Convenience And Necessity And a Certificate of Environmental Compatibility To Construct Four 75 Megawatt Combustion Turbine Peaking Units And Associated Facilities Scheduled For Completion In 1994 And 1995, Respectively, To Be Located At The Company's E.W. Brown Generating Station In Mercer County, Kentucky.

A-9. Please see the response to Question 7.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-10**

Responding Witness: Ronald L. Willhite

- Q-10. What is the earliest verifiable date that anyone at KU concluded that the Commission had issued a certificate of environmental compatibility in 1991 for the entire Brown site.
- a) If the date is before December 20, 1993, explain in detail why KU filed an application with the Commission on December 20, 1993 requesting a certificate of environmental compatibility to construct one turbine at the Brown site.
  - b) If the date is prior to May 13, 1994, did KU advise the Commission prior to its granting a certificate of environmental compatibility for one turbine at the Brown site that the requested certificate was not needed?

A-10. Please see the response to Question 7.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-11**

**Responding Witness: Lonnie E. Bellar**

Q-11. Refer to the Application at Page 2. LG&E and KU indicate that the two combustion turbines ("CTs") will be the fifth and sixth units at KU's E. W. Brown Generating Station ("Brown"). What is the total megawatt capacity of the CTs currently in place at Brown?

A-11. The current ratings for the existing CTs at Brown are as follows:

<b>Plant</b>	<b>Generator Nameplate Rating (MW)</b>	<b>Winter 1999 Rating (MW)</b>	<b>Summer 1999 Rating (MW)</b>
Brown 8	126	135	110
Brown 9	126	139	110
Brown 10	126	135	110
Brown 11	126	122	110
<b>Total Brown CT</b>	<b>504</b>	<b>531</b>	<b>440</b>

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-12**

**Responding Witness: Caryl M. Pfeiffer**

Q-12. Refer to Exhibits 1 and 2 of the Application. These exhibits contain copies of various environmental approvals and permits KU secured in the early 1990s for the planned CTs at Brown.

- a) Have any of the approvals or permits been modified, amended, or updated since the authorization date?
- b) If yes, provide copies of the modification, amendment, or update, along with an explanation of the nature of the change. Also explain in detail why this information was not included in the Application.

A-12.

- a) No, LG&E and KU have provided copies of the most current environmental permits applicable to the E.W. Brown CT site.
- b) Not applicable.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-13

Responding Witness: Caryl M. Pfeiffer

Q-13. Provide the following information concerning the installation of CTs at Brown, as was envisioned when KU originally sought the environmental approvals and permits.

- a) The megawatts to be generated by the CTs.
- b) The various emissions limitations.
- c) The various effluent discharge limitations.

A-13.

- a) At the time KU originally sought the environmental approvals and permits for the installation of the CTs at E.W. Brown, the megawatts to be generated by the CTs was estimated at 800 MW.
- b) At the time KU originally sought the air emission permits for the installation of the CTs at E.W. Brown, KU had not selected a combustion turbine vendor. Thus KU submitted information (heat input, stack heights, exhaust gas flow rates and velocities, fuel types, pollutant mass emission rates and grain loadings, and hours of operation) to the Kentucky Division for Air Quality (KYDAQ) for each of the four different CTs under consideration by KU. The air quality impact analysis was performed using the worst case emissions from any one turbine.

The various air emission limitations were determined by the KYDAQ for each turbine at 1,368 mmBtu maximum heat input at ISO standard conditions (or a total of 10,944 mmBtu maximum heat input for the CT site) and at worst case air quality impacts and are as follows:

Nitrogen Oxides: NO<sub>x</sub> – 65 ppm while burning No. 2 fuel oil (equivalent to 297 tons/yr/turbine) and 42 ppm while burning natural gas (equivalent to 198 tons/yr/turbine), controlled through water injection.

Sulfur Dioxide: SO<sub>2</sub> – 444 lbs/hr/turbine controlled by the use of low sulfur fuel oil (less than or equal to 0.3%S) and a maximum of 2,500 hours/year of operation. Note that the SO<sub>2</sub> limit is reduced to 402 lbs/hr/turbine upon operation of the last turbine.

Carbon Monoxide: CO – 75 lbs/hr/turbine and Volatile Organic Compounds: VOCs – 20.4 lbs/hr/turbine both controlled by good combustion efficiency and operation at full load conditions to the extent possible.

ITEM NO. PSC-13  
PAGE 1 OF 2  
WITNESS Pfeiffer

Particulate Matter: PM – 67 lbs/hr/turbine controlled by good combustion efficiency.

- c) At the time KU originally sought the effluent discharge permit for the installation of the CTs at E. W. Brown, KU did so as a modification to the existing KPDES permit for the coal-fired units at the E. W. Brown Generating Station. KU submitted information on the wastewater discharges expected from the CTs to the KY Division of Water (KYDOW). The various wastewater effluent limitations were determined by the KYDOW based on KU's submittal of the magnitude and quality of the different wastewaters resulting from the CT site. All of the wastewaters resulting from the operation of the CT facility were handled as internal wastestreams (there are no direct discharges from the CT facility site):

Stormwater Runoff - routed to a new oil/water separator on the CT site and discharged to the existing ash treatment basin serving the E.W. Brown Generating Station for further treatment prior to discharge to Herrington Lake.

Miscellaneous Floor Drains – the water collected in the floor drains consists mainly of washwaters resulting from maintenance activities which are routed to a new oil/water separator on the CT site and discharged to the existing ash treatment basin serving the E.W. Brown Generating Station for further treatment prior to discharge to Herrington Lake.

The KYDOW placed no additional effluent limitations on the internal wastewaters from the CT site because there were already specific monitoring requirements and effluent limitations on the ash treatment basin (Outfall 001) at E.W. Brown for oil and grease, pH, and total suspended solids.

ITEM NO. PSC-13  
PAGE 2 OF 2  
WITNESS Pfeiffer

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-14**

**Responding Witness: Caryl M. Pfeiffer**

Q-14. Provide the following information concerning the CTs currently operating at Brown.

- a) The various levels of emissions, as of the end of 1998 or the most recent information available.
- b) The various levels of effluent discharges, as of the end of 1998 or the most recent information available.

A-14.

- a) The various levels of air emissions for calendar year 1998 are as follows:

	<b>CT8</b>	<b>CT9</b>	<b>CT10</b>	<b>CT11</b>
<b>NOx (tons)</b>	66.3	73.5	68.3	38.1
<b>SO2 (tons)</b>	0.4	2.7	2.8	3.6
<b>CO (tons)</b>	47.6	48.73	46.48	25.61
<b>VOC (tons)</b>	5.2	5.6	5.5	3.3
<b>PM (tons)</b>	5.81	6.24	6.04	3.67

- b) There are no monitoring requirements or effluent limitations for the stormwater runoff or wastewater from the miscellaneous floor drains at the CT site. KU does monitor the whole effluent from the ash treatment basin (Outfall 001) at the E.W. Brown site and will provide the Commission with the monthly Discharge Monitoring Reports for calendar year 1998 upon request.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-15**

Responding Witness: Caryl M. Pfeiffer

Q-15. Provide the following information concerning the two new 164 megawatt CTs under construction at Brown, for both the units alone and for the entire site upon the new CTs becoming operational.

- a) The levels of emissions expected.
- b) The levels of effluent discharges expected.

A-15.

- a) The level of air emissions from the two new CTs alone and in combination with the existing four CTs at the E.W. Brown site will operate within the allowable emissions limitations of the air permit issued by the KYDAQ, attached as Exhibit 2 to the Application.
- b) The level of wastewater effluent discharges from the two new CTs alone and in combination with the existing four CTs at the E.W. Brown site will represent an increase in the wastewater flows allowed in the KPDES permit issued by the KYDOW, attached as Exhibit 2 to the Application. KU has been in discussions with the KYDOW for the last few months regarding the two new CTs. KU is in the process of applying for a modification to the existing KPDES permit for the E.W. Brown Generating Station site to account for the increased wastewater flows from the two new CTs. KU expects to file the permit modification in the first two weeks of April and we anticipate receiving approval from the KYDOW within 30 days from that filing.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-16**

Responding Witness: Caryl M. Pfeiffer

Q-16. Refer to Exhibit 2, Page 4 of 4, of the Application, General Conditions No. 17.

- a) For the four CTs already operational at Brown, was the phased construction schedule listed in General Conditions No. 17 complied with? If not, what were the ramifications of not being in compliance with the construction schedule?
- b) It would appear that the construction of the two new 164 megawatt CTs is not in compliance with the permit construction schedule. Describe the impacts non-compliance with the construction schedule has on the overall air quality permit.

A-16.

- a) Yes, for the four CTs already operational at the E.W. Brown site, the phased construction schedule in the air permit issued by the KYDAQ, attached as Exhibit 2 to the Application, was followed.
- b) The construction of the two new CTs is in compliance with the phased construction schedule in the air permit issued by the KYDAQ, attached as Exhibit 2 to the Application. Construction of any phase of the CT project must be commenced within 18 months of the date specified in the schedule. The two new CTs represent Phases IV (April 1998) and V (April 1999) and thus construction must commence by October 1999 and October 2000, respectively. If these deadlines were missed, the KYDAQ could revoke the portion of the permit that applies to these phases.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-17**

Responding Witness: Ronald L. Willhite

Q-17. Refer to Exhibit 3a of the Application, the General Conditions of Sale between ABB Power Generation, Inc. and LG&E Capital Corp.

- a) When was this agreement executed?
- b) Provide a copy of the October 2, 1998 letter from C. A. Markel to Chris Broemmelsiek, which is referenced in the "General" section of the agreement.
- c) Explain in detail why only a portion of this document was included in the application.
- d) Provide copies of the entire General Conditions of Sale document.

A-17.

- a) November 2, 1998.
- b) A copy of this October 2, 1998 letter is attached to this response.
- c) The application contained the essential terms of the contract called General Conditions of Sale. The appendices to this contract support the General Conditions of Sale and contain information provided by ABB which that company has designated as confidential and proprietary.
- d) Copies of the requested document are being provided under separate cover. The information is confidential and proprietary and not available for public disclosure. The information is being filed with the Commission pursuant to a petition for confidential treatment.

ITEM NO. PSC-17  
PAGE 1 OF 3  
WITNESS Willhite

October 2, 1998

**Charles A. Markel**  
Vice President - Finance  
and Treasurer

**LG&E Energy Corp.**  
220 West Main Street  
P.O. Box 32030  
Louisville, Kentucky 40232  
502-627-2203  
502-627-3939 FAX  
charles.markel@lgeenergy.com

Mr. Chris Broemmelsiek  
Vice President  
ABB Power Generation Inc.  
5309 Commonwealth Centre Parkway  
Midlothian, VA 23112

Ladies and Gentlemen:

*attached to the  
ABB Terms Sheet  
dated 10/1/98  
CRB*

This letter, when executed by you and returned to the undersigned by facsimile at 502-627-3367 shall constitute a binding letter of intent between ABB POWER GENERATION INC. ("Seller") and LGE Capital Corp. ("Buyer"), pursuant to which Seller intends to sell to Buyer, and Buyer intends to purchase from Seller, two GT 24 Simple Cycle Gas Turbines and auxiliaries (the "Equipment") more particularly described in the ABB Proposal dated August 27, 1998 (the "Proposal"), which is subject to further negotiation and modification by the parties and will reflect an "equipment only" instead of a turn-key contract, on the terms and conditions set forth in (i) the Proposal, (ii) the General Conditions of Sale ~~attached hereto~~, subject to further negotiation and modification (iii) the Scope of Work provided by ABB on October 1, 1998, (iv) *CRB* the Term Sheet dated October 1, 1998, and (v) such detailed terms as to equipment specifications, delivery schedules, performance criteria and related technical data as the parties may negotiate to be set forth in a Purchase Order to be negotiated between the parties on or before October 13, 1998. If the parties are unable in good faith to negotiate the terms of the Proposal, the Purchase Order and General Conditions of Sale on or before October 13, 1998, this Letter of Intent shall terminate.

Buyer and Seller shall seek to reach agreement on a "MOU" memorandum of understanding, based on a reasonable efforts basis to provide Seller the "right of first opportunity" for Buyer to purchase equipment and or turnkey plants for the following projects:

- Petrobras Project in Brazil
- Next combined cycle project in U.S. that will use multiple gas turbines with individual ratings greater than 150 megawatts
- Brown station (KU) extension 1x11N2 simple cycle

*CRB*

*"right of first opportunity" MOU on the above three project*

The foregoing shall be subject to approval of Buyer's partners and regulatory authorities. Failure of the parties to enter into a memorandum of understanding with regard to such projects by October 13, 1998 shall not subject the sale of the Equipment described above to termination.

Upon receipt by Buyer of a signed copy of this letter, Buyer shall transfer \$10,000,000 by wire transfer to Seller's account on October 2, 1998, which amount shall be applied in full to the purchase price for the Equipment. If the parties are unable in good faith to negotiate the terms of the Purchase Order on or before October 13, 1998, the \$10,000,000 shall be refunded to Buyer less a "cancellation fee" consisting of (i) any external supplier costs incurred by ABB to any

ITEM NO. PSC-17  
PAGE 2 OF 3  
WITNESS Willhite

other party (including affiliates of ABB) between October 2 and October 13 in preparation for this transaction and (ii) \$500,000 per month for each month (prorated to the actual number of days in a month) beginning as of October 13, 1998, that the Equipment remains unsold (reducing to \$250,000 per month if one turbine is sold) up to a maximum of \$5,000,000. ABB shall have a good faith duty to mitigate the cancellation fee. Until October 13, 1998, (unless an extension is mutually agreed to by the parties), Seller shall take the Equipment off the market and not negotiate its sale with third parties.

Sincerely,

LGE Capital Corp.

By CA Markel  
Title Chief Financial Officer

AGREED TO:

ABB POWER GENERATION INC.

By Christopher J. Grandjean  
Title: Vice President

10/2/98  
6:30pm EDT

mlg/vnjg:85  
F:\USERS\085\LG&EKY\UTIL\AINTENT.LTR  
10/2/98

ITEM NO. PSC-17  
PAGE 3 OF 3  
WITNESS Willhite

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-18**

Responding Witness: Michael D. Robinson

Q-18. Provide the following information concerning the site of the new CTs at Brown:

- a) The original book cost to KU for the land and all associated facilities and services that will be utilized during the construction of the CTs.
- b) The fair market values of all the assets listed in the response to part (a) above, as of November 1998. Include a detailed explanation as to how KU determined the fair market values.
- c) All accounting entries made to KU's books reflecting the transfer of the new CTs' site and associated facilities and services from KU to LG&E Capital Corp. If no accounting entries were recorded, explain in detail why.
- d) All accounting entries made to KU's books that reflect expenses associated with the construction of the new CTs that KU is charging to LG&E Capital Corp. For each entry, explain in detail how the expense is determined and how it is allocated.

A-18.

- a) Land and Other facilities associated with all CTs (existing and future) located at the E.W. Brown site have the following original book costs:

Land and Land Rights	\$ 242,014
Rights of way	206,681
Structures and improvements	6,754,589
Fuel holders, producers & accessories	9,855,153
Accessory electrical equipment	1,649,717
Misc. power plant equipment	497,079
Substation structure and improvement	93,411
Substation equipment	<u>117,369</u>
Total	<u>\$19,416,013</u>

Upon receiving Commission approval, LG&E will be allocated its appropriate share of these KU assets.

- b) The fair market value of the assets is not known. Appraisals will be made on the property if required.
- c) KU has not transferred the new CTs site and associated facilities and services to LG&E Capital Corp. and therefore no accounting entries have been made.

ITEM NO. PSC-18  
PAGE 1 OF 2  
WITNESS Robinson

Under the companies' accounting procedures, costs for construction of these assets are recorded to work orders of the subsidiary incurring the costs. A majority of the construction costs for the CTs have been recorded by LG&E Capital Corp. Costs incurred by KU have been recorded to work orders on the books of KU. When construction is completed, the total cost of the project will be computed using total costs incurred by both LG&E Capital and KU. Subject to Commission approval, the appropriate share of the CT costs will then be allocated to KU and LG&E and billed accordingly through an intercompany billing.

- d) KU has established five work orders used by its accounting system for tracking costs associated with constructing the CTs for LG&E Capital Corp. These work orders are charged to general ledger account 107 "construction work in progress." As costs are incurred by KU, invoices or labor and associated overhead charges are coded to these work orders. The following represents costs incurred since inception by KU by work order as of February 28, 1999:

Labor, overhead and other expenses – CT Unit No. 6	\$59,317
Labor, overhead and other expenses – CT Unit No. 7	52,042
Gas pipeline construction	11,589
Demineralizer	37,892
Substation equipment	47,386

To date, no expenses have been allocated from KU to LG&E Capital Corp. See response given to 18 c) for an explanation of how the allocation of costs will be handled.

ITEM NO. PSC-18  
PAGE 2 OF 2  
WITNESS Robinson

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-19**

Responding Witness: Ronald L. Willhite

- Q-19. Refer to the testimony of Ronald L. Willhite, Page 9. LG&E Energy Corp.'s Corporate Policies and Guidelines for InterCompany Transactions ("Transaction Guidelines") clearly state that, "Transfers or sales of assets will be priced at the greater of cost or fair market value for transfers or sales from LG&E or KU to LG&E Energy or other subsidiaries and at the lower of cost or fair market value for transfers or sales made to LG&E or KU from LG&E Energy or any of LG&E Energy's non-utility subsidiaries." Explain why Mr. Willhite states on Page 9 of his testimony that, if the Commission grants the certificate requested by LG&E and KU, LG&E Capital Corp. will transfer title of ownership of the two new CTs to LG&E and KU at cost.
- A-19. The cost of the CTs at the time of the transfer will be less than the fair market value. Therefore, the transfer of the CTs at cost is appropriate under the Corporate Policies and Guidelines for InterCompany Transactions.

LOUISVILLE GAS AND ELECTRIC COMPANY  
 KENTUCKY UTILITIES COMPANY  
 CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-20**

Responding Witness: Michael D. Robinson

Q-20. Assume for the purposes of this question that the Commission approves the request to transfer the two new CTs to LG&E and KU.

- a) Provide the accounting entries that will be made on LG&E's and KU's books to reflect the respective shares of the new CTs.
- b) Provide a listing of the expenses KU will incur to operate and maintain the new units. Explain in detail how KU will allocate to LG&E its portion of these expenses. A response that the Transaction Guidelines will be followed will be deemed an insufficient response.

A-20.

- a) Accounting entries that will be made on LG&E's and KU's books to reflect the respective shares of the new CTs:

Account <sup>(1)</sup>	Description	Debit	Credit
340	Land and Land Rights	\$XX	
341	Structures	XX	
342	Fuel Holders, Producers & Accessories	XX	
343	Prime Movers	XX	
344	Generators	XX	
345	Accessory Electrical Equipment	XX	
346	Misc. Power Plant Equipment	XX	
234	Interco. payable – LG&E Energy Corp. <sup>(2)</sup>		\$XX

<sup>(1)</sup> With the exception of account 234, these represent plant accounts which are identified with account 101 "Plant in Service" on the general ledger. Account 234 is also a general ledger account.

<sup>(2)</sup> LG&E Capital Corp. would reverse the construction assets from its books and bill LG&E Energy Corp. which would bill KU and LG&E for their respective shares of the costs of the completed CTs.

- b) In allocating to LG&E its share of ongoing expenses in the operation and maintenance of its turbine, KU will employ cost accounting methods consistent with those used by LG&E in allocating costs to other affiliates of LG&E Energy Corp. These methods identify costs into two main categories: (1) direct costs, which by their nature, are any costs that can be specifically identified with a cost object. A cost object is a product, contract, project,

ITEM NO. PSC-20  
 PAGE 1 OF 2  
 WITNESS Robinson

organizational subdivision, function or other unit for which costs are measured or estimated. Direct costs are charged directly to the cost object and require no allocation. These are typically costs such as direct labor or accounts payable invoices for goods or services directly attributable to the cost object; and (2) assignable costs have a less direct relationship to cost objects and therefore must be allocated to cost objects. These are typically overhead and related costs such as building rent, insurance, transportation expenses, telephone usage, computer usage, employee taxes and other fringe benefits, etc. Assignable costs are generally charged using a systematic and rational allocation base such as square footage, units of production, direct labor, headcount, etc.

KU will track non-fuel and related direct operation and maintenance costs associated with the CTs through work orders specifically assigned to these units. These work orders will be distinguished from work orders accumulating costs related to KU's existing CTs. Assignable costs will be allocated based on direct costs such as labor and materials and supplies consistent with the application of other overheads and fringe benefits routinely allocated by KU's accounting system. Direct and assignable costs will be allocated and billed to LG&E based upon their ownership percentage of 38%. Non-fuel costs to operate and maintain these units include labor, vehicle expenses, employee expenses, office supplies, outside services, and materials and supplies.

Fuel and related expenses allocated to LG&E will be determined by measuring fuel consumed by the new CTs and will be charged to LG&E based upon the ratio of LG&E generation dispatched relative to total generation from the new CTs.

ITEM NO. PSC-20  
PAGE 2 OF 2  
WITNESS Robinson

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-21** Responding Witnesses: Ronald L. Willhite / Michael D. Robinson

Q-21. Assume for purposes of this question that the Commission does not approve the request by LG&E and KU.

- a) Whose personnel will be actually operating and maintaining the CTs, LG&E Capital Corp.'s or KU's?
- b) If KU's, describe the expenses that will be allocated between the two entities, and explain in detail how allocations will be made. A response that the Transaction Guidelines will be followed will be deemed an insufficient response.
- c) Explain in detail how the gas supply and other fuel-related expenses would be allocated between KU and LG&E Capital Corp. A response that the Transaction Guidelines will be followed will be deemed an insufficient response.
- d) What would the estimated revenues from the transmission of the CTs' generation be to KU on an annual basis? Explain how the estimate was determined.

A-21.

- a) KU employees will be operating and maintaining the CTs.
- b) Please see response to Question 20 b) above for discussion of how costs will be allocated to the CTs. If these assets are 100% owned by LG&E Capital Corp., 100% of the costs of operating and maintaining these units would be billed to LG&E Capital Corp. by KU.
- c) The gas consumed by the CTs will be measured and 100% of the direct fuel expenses would be charged to LG&E Capital Corp by KU. Other fuel-related expenses would be allocated between KU and LG&E Capital Corp. in the same manner as that described in the response to Question 20-b).
- d) No estimate has been made of these transmission revenues. In any event, LG&E Capital Corp would take transmission service pursuant to the OATT and execute the appropriate service agreements for this regulated service.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

**Question: PSC-22**

Responding Witness: H. Bruce Sauer

- Q-22. Refer to Exhibits HBS-2 and HBS-3 of the Application. Describe the extent to which the energy and demand forecast methodologies presented in these exhibits are different from the methodologies employed in LG&E's and KU's last integrated resource plans filed with the Commission.
- A-22. For LG&E, there are no methodological changes from the last integrated resource plan. For KU, the following changes can be noted:
- a) KU has switched to a service territory specific economic and demographic forecasting model. This model is briefly described in the last paragraph on page 7 HBS-3 under the heading KENTUCKY UTILITIES Data Sets and is also described in concept on pages 205 and 206 of the Forecast Report in Volume II, Technical Appendix, of KU's 1996 integrated resource plan.
  - b) A short run econometric model has been added for the Kentucky-Retail Commercial sector. This model is described on page 12, Exhibit HBS-3.
  - c) A short run econometric model was also introduced for the Kentucky-Retail Industrial sector. This model is described on page 13, Exhibit HBS-3.
  - d) Municipal Pumping sales in the Virginia Jurisdiction (Old Dominion Power) are now separated from schools and forecast as part of the Virginia Commercial/Industrial sector. The methodology for the Virginia Commercial/Industrial model is described on page 16, Exhibit HBS-3.
  - e) The HELM model has been modified to split commercial and industrial loads into separate classes for system peak estimation.

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-23

Responding Witness: Lonnie E. Bellar

- Q-23. Mr. Ronald L. Willhite in his testimony stated, "In fact, the companies have issued request for purchased power for the summers of 1999-2002."
- a) Provide a copy of the request for purchased power "RFPP" which was sent out.
  - b) Provide a list of the recipients of the RFPP.
  - c) Provide a copy of each response to the RFPP and a summary of all responses that ranks the proposals and explains why each was accepted or rejected.
  - d) Since the CTs will be used for a period longer than 1999-2002, explain why your RFPP was limited to the 1999-2002 period instead of a longer period.

A-23.

- a) A copy of the request for purchased power (RFPP) is attached to this response.
- b) The list of recipients is attached to this response. The RFPP was sent to 107 potential suppliers ranging from IOUs, Electric Cooperatives, Large Municipal organizations, and Marketing entities. The RFPP was issued on February 10, 1999.
- c) Copies of the documents described below are included under separate cover. The information is confidential and proprietary and not available for public disclosure. The information is being filed with the Commission pursuant to a petition for confidential treatment.
  - 1) A summary of all responses to the RFPP
  - 2) The individual responses to the RFPP

None of the proposals were accepted. The reasons for rejection and conclusions follow:

- 1) All firm proposals were conditional in that they were immediately subject to price review or expired by February 26, with the exception of Avista (it was sent on 2/26, with a 3/1 expiration). This fact simply confirms what was stated in Mr. Willhite's testimony (page 8, lines 15-16) "we determined that the use of a formal solicitation [RFPP] would not produce useful or reasonable information ..." The results of this RFPP were neither useful or reasonable for use in evaluating the acquisition of combustion turbines.

ITEM NO. PSC-23  
PAGE 1 OF 6  
WITNESS Bellar

- 2) From the prices that were submitted, it was clear that each proposal was more costly than the actively traded market.
  - 3) The prices proposed by all responding parties were higher than those used as estimates in the Resource Assessment, which reinforces the conclusion of the Resource Assessment that the proposed CTs are the least-cost alternative.
  - 4) The RFPP responses, while somewhat higher than the Companies' forecast, confirmed Mr. Bellar's testimony that "the Companies expected their forecast of market prices to be indicative of probable RFP[P] responses (page 5, lines 11-13)".
- d) The RFPP states under Item 2 that power is required for the listed periods (June, July and August of 1999-2002). However, the RFPP also states that "proposals of any duration are acceptable." Thus, while particular attention was given to the 1999-2002 period, the proposal was not expressly limited to that period.

ITEM NO. PSC-23  
PAGE 2 OF 6  
WITNESS Bellar

Charles A. Freibert, Jr.  
Director  
Energy Marketing

502-627-3673  
502-627-3613 FAX

February 10, 1999

## RE: REQUEST FOR PROPOSALS

Dear

Due to increased demand and energy needs, LG&E/KU is requesting proposals for specific power products. It is LG&E/KU's intent to analyze RFPs, determine a cost effective and reliable solution, and execute appropriate contracts in a short timeframe. This RFP is not a commitment to purchase and shall not bind LG&E/KU or any subsidiaries of LG&E Energy Corp in any manner. The bids received will receive serious consideration and the bidders will be personally notified of the status of their proposals.

1. **Capacity Need** – 500MW. Smaller quantities, preferably in 50MW increments, will be considered. Multiple purchases from various suppliers may be executed to meet this need.
2. **Term** – Power is required during the following periods. Proposals of any duration are acceptable.
  - 2.1. June, July and August 1999
  - 2.2. June, July and August 2000
  - 2.3. June, July and August 2001
  - 2.4. June, July and August 2002
3. **Product Descriptions**
  - 3.1. **Option on Index** – LG&E would have the right to schedule by 7:00 a.m. CPT for the next day a standard on peak 16 hour schedule, 07:00 to 22:00 CPT, for the quantity of power offered. The energy price will be based on Power Markets Weekly, Daily "Into Cinergy" index. An index plus or minus a constant structure is acceptable for energy pricing.
  - 3.2. **Peaking Call** – LG&E would have the right to schedule by 10:00 a.m. CPT for the next day for any 4 consecutive hours the quantity of power offered. The desired energy strike price is \$150.00/MWH. However, other stike prices will be evaluated.
  - 3.3. **Sixteen Hour Call** – LG&E would have the right to schedule by 10:00 a.m. CPT for the next day a standard on peak 16 hour schedule, 07:00 to 22:00 CPT, for the quantity of power offered. The desired energy strike price is \$150.00/MWH. However, other strike prices will be evaluated.

ITEM NO. PSC-23  
PAGE 3 OF 6  
WITNESS Bellar

4. **Delivery Point** – Power will be delivered into any available LG&E/KU or Cinergy interface point. The proposal must specify the control area where power will be delivered. The seller is responsible for all cost and tagging required to deliver energy at the delivery point.
5. **Pricing Information** – Pricing will include all existing and future cost associated with the delivery of the power at the specified delivery point. Price quotes will be considered firm during the week of evaluation unless stated otherwise.
6. **Credit Rating** – Bidders will be reviewed to ensure compliance with the LG&E/KU credit criteria. Failure to comply may be remedied by an acceptable letter of credit.
7. **Confidentiality** – LG&E/KU will treat each proposal as confidential during the evaluation process and expects each bidder to agree that the proposal and associated negotiations will be treated as confidential during the evaluation process.
8. **Schedule For the RFP Process**

8.1. Mailing of Request For Proposals	February 10, 1999
8.2. Proposal due date	February 19, 1999
8.3. Completion of Evaluation	February 23, 1999
8.4. Notification to Bidders	February 23, 1999
8.5. Execution of Strategy	February 26, 1999
9. **Contact Information** – LG&E/KU must receive Proposals by 5:00 p.m. EST on Friday, February 19, 1999. Email notification that a proposal has been sent is requested. A signed copy of each proposal sent by email is expected in 2 business days. Please contact Charlie Freibert with all proposal information, questions, or concerns.

Charles A. Freibert, Jr.  
 Director, Energy Marketing  
 LG&E/KU  
 220 West Main Street  
 Louisville, Kentucky 40202

Phone: 502-627-3673  
 Pager: 502-332-1170  
 Email: [Charlie.Freibert@lgeenergy.com](mailto:Charlie.Freibert@lgeenergy.com)

In closing, we look forward to your response and are prepared to analyze and evaluate each proposal to determine its value in meeting the LG&E/KU future power needs.

Your interest in this request is greatly appreciated. Please contact us if you have any question whatsoever.

Sincerely,

Charles A. Freibert, Jr.  
 Director, Energy Marketing

ITEM NO. PSC-23  
 PAGE 4 OF 6  
 WITNESS Bellar

**Customers Receiving RFP**

1	AES Power, Inc.	55	Illinova Power Marketing, Inc.
2	Alabama Electric Cooperative, Inc.	56	Indiana Municipal Power Agency
3	Allegheny Power	57	Indianapolis Power & Light Company
4	Ameren Services Company	58	Industrial Energy Applications, Inc.
5	American Electric Power Service Corp.	59	InterCoast Power Marketing Company
6	American Municipal Power - Ohio, Inc.	60	Jacksonville Electric Authority
7	Amoco Energy Trading Corporation	61	K N Marketing, Inc.
8	Aquila Power Corporation	62	Kimball Power Company
9	Associated Electric Co.	63	Koch Energy Trading, Inc.
10	Avista Energy	64	Merchant Energy Group of the Americas, Inc.
11	AYP Energy, Inc.	65	Mid-American Energy Company
12	Big Rivers Electric Corp.	66	MidCon Power Services Corp.
13	Calpine Power Services Company	67	Minnesota Power & Light Company
14	Cargill-Alliant, LLC	68	Morgan Stanley Capital Group, Inc.
15	Carolina Power & Light Company	69	New York State Electric & Gas Corp.
16	Central Illinois Light Company	70	NorAm Energy Services, Inc.
17	Cinergy Services Inc.	71	Northern Indiana Public Service Company
18	Citizens Power Sales	72	OGE Energy Resources, Inc.
19	City Water, Light and Power, Springfield	73	Oglethorpe Power Corporation
20	CMS Marketing, Services & Trading Co.	74	Ohio Valley Electric Corporation
21	CNG Power Services Corp.	75	Pacificorp Power Marketing, Inc.
22	Columbia Energy Power Marketing	76	PECO Energy Company - Power Team
23	Columbia Water & Light Department	77	PG&E Energy Trading-Power, L.P.
24	Commonwealth Edison Company	78	PG&E Power Services Company
25	ConAgra Energy Services, Inc.	79	PP&L, Inc.
26	Constellation Power Source, Inc.	80	Proliance Energy, L.L.C.
27	Coral Power, L.L.C.	81	Public Service Electric & Gas Company
28	Dayton Power & Light Company	82	QST Energy Trading, Inc.
29	Detroit Edison & Consumers Power	83	Rainbow Energy Marketing Corporation
30	DTE Energy Trading, Inc.	84	SCANA Energy Marketing, Inc.
31	Duke Energy Trading & Marketing, LLC	85	Sempra Energy Trading Corporation
32	DuPont Power Marketing, Inc.	86	Sonat Power Marketing L.P.
33	Duquesne Light Company	87	South Carolina Electric & Gas Company
34	East Kentucky Power Cooperative	88	Southern Company Energy Marketing L.P.
35	El Paso Power Services Company	89	Southern Company Services, Inc.
36	Electric Clearinghouse, Inc.	90	Southern Illinois Power Cooperative
37	Electric Energy, Inc.	91	Southern Indiana Gas & Electric Company
38	Energy Authority, The	92	Statoil Energy Trading, Inc.
39	Engage Energy US, L.P.	93	Tallahassee, Florida, City of
40	Engelhard Power Marketing, Inc.	94	Tenaska Power Services Company
41	Enron Power Marketing, Inc.	95	Tennessee Valley Authority
42	Enserch Energy Services, Inc.	96	Tractebel Energy Marketing, Inc.
43	Entergy Power Marketing Corp.	97	TransCanada Power Corp.
44	Entergy Services, Inc.	98	Utilicorp United, Inc.
45	Equitable Power Services Company	99	Utility-Trade Corp., The
46	FirstEnergy Corp.	100	Virginia Electric and Power Company
47	FirstEnergy Trading & Power Marketing	101	Vitol Gas & Electric LLC
48	Florida Power & Light Company	102	Wabash Valley Power Association
49	Florida Power Corporation	103	Western Power Services, Inc.
50	Griffin Energy Marketing, L.L.C.	104	Western Resources, Inc.
51	Hamilton, Ohio, City of	105	Williams Energy Services Company
52	Hoosier Energy	106	Wisconsin Electric Power Company
53	Illinois Municipal Electric Agency	107	WPS Energy Services, Inc.
54	Illinois Power Company		

ITEM NO. PSC-23  
 PAGE 5 OF 6  
 WITNESS Bellar

**Question: PSC-23(c)**

The information in response to this question is subject to a request for confidential protection under 807 KAR 5:001, Section 7. The original filed with the Commission contains the requested information. This information is omitted in all other copies submitted herewith.

ITEM NO. PSC-23  
PAGE 6 OF 6  
WITNESS Bellar

LOUISVILLE GAS AND ELECTRIC COMPANY  
KENTUCKY UTILITIES COMPANY  
CASE NO. 99-056

Response to Commission's Order 1st Data Request Dated March 16&19, 1999

Question: PSC-24

Responding Witness: Lonnie E. Bellar

Q-24. Has this ABB 164MW CT proposed in your application been tested and in operation in the USA? If yes, provide the following information.

- a) How long has this CT been in operation?
- b) How many of these CTs have been installed?
- c) Has any problem been encountered with this model?
- d) What kinds of fuel will this CT require?
- e) If natural gas is the primary fuel to be used, will additional pipeline need to be constructed? Explain.

A-24.

- a) There is one other GT24 in commercial operation in the US at this time, located at the Gilbert Station in New Jersey. This is the prototype machine for this model. After an extensive testing program by the manufacturer, it was placed into commercial operation in December 1997. Currently the machine has logged nearly 2,000 fired hours and 350 starts.
- b) The serial numbers of our machines are #14 and #15. Besides the unit at Gilbert, eight have been installed in Korea. Six of the Korean units have been commercial since approximately August of 1998. The other two units were in the commissioning phase and delayed when the Korean economy suffered its serious downturn; they have been commercial since late last year. Four units are in the commissioning phase in Taiwan.  
There are five other units currently in construction in the US, excluding the LG&E and KU units; one is in Massachusetts and the other four are in Texas.
- c) There have been no major problems with this model.
- d) Natural gas will be the primary fuel; No. 2 fuel oil will be the back-up fuel.
- e) A new 650 psig gas line is being constructed at the existing reducing station at the E. W. Brown site to the new units. This new pipeline is approximately 2,300 feet in length and is located entirely on KU's property. The cost of this pipeline has been included in the Resource Assessment evaluation. The new line is required because of the higher gas delivery pressure requirements of the GT24s compared to the existing CTs at Brown, which require approximately 400 psig of gas delivery pressure.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

COMMONWEALTH OF KENTUCKY  
PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

APPLICATION OF LOUISVILLE GAS AND  
ELECTRIC COMPANY AND KENTUCKY  
UTILITIES COMPANY FOR A CERTIFICATE  
OF CONVENIENCE AND NECESSITY FOR  
THE ACQUISITION OF TWO 164 MEGAWATT  
COMBUSTION TURBINES

CASE NO. 99-056

FILED

JUN 15 1999

PUBLIC SERVICE  
COMMISSION

TRANSCRIPT OF EVIDENCE

DATE OF HEARING: JUNE 1, 1999

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

APPEARANCES

HON. PAUL SHAPIRO, HEARING OFFICER

HON. RICHARD RAFF, COUNSEL FOR COMMISSION STAFF

FOR LOUISVILLE GAS AND ELECTRIC COMPANY  
AND KENTUCKY UTILITIES COMPANY:

HON. KENDRICK RIGGS  
HON. LAUREN ANDERSON  
OGDEN, NEWELL & WELCH  
1700 CITIZENS PLAZA  
500 WEST JEFFERSON STREET  
LOUISVILLE, KENTUCKY 40202

HON. MICHAEL BEER  
LOUISVILLE GAS AND ELECTRIC COMPANY  
220 WEST MAIN STREET  
P. O. BOX 32010  
LOUISVILLE, KENTUCKY 40232

FOR ATTORNEY GENERAL'S OFFICE:  
HON. ELIZABETH E. BLACKFORD  
ASSISTANT ATTORNEY GENERAL  
1024 CAPITAL CENTER DRIVE  
FRANKFORT, KENTUCKY 40601

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

I N D E X

PAGE NO.

Appearances	2
Discussion	4-8
RONALD L. WILLHITE	
Direct Examination by Mr. Riggs	8-10
Cross Examination by Ms. Blackford	10-15
Cross Examination by Mr. Raff	15-25
H. BRUCE SAUER	
Direct Examination by Mr. Riggs	26-28
Cross Examination by Mr. Raff	28-31
JAMES W. KASEY	
Direct Examination by Mr. Riggs	32-33
Cross Examination by Ms. Blackford	34-40
Cross Examination by Mr. Raff	41-42
LONNIE E. BELLAR	
Direct Examination by Mr. Riggs	43-47
Cross Examination by Ms. Blackford	48-57
Cross Examination by Mr. Raff	58
Confidential Cross Examination by Mr. Raff Contained in Separate Transcript Consisting of 28 Pages	
Discussion	59-62
MICHAEL ROBINSON	
Examination by Hearing Officer Shapiro	62
Cross Examination by Mr. Raff	63-70
DAVID H. BROWN KINLOCH	
Direct Examination by Ms. Blackford	71-72
Cross Examination by Mr. Riggs	72-90
Cross Examination by Mr. Raff	90-92
Recross Examination by Mr. Riggs	93
Discussion	94-98
Reporter's Certificate	99

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

This is a hearing before the Kentucky Public Service Commission in the matter of the application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the acquisition of two 164 megawatt combustion turbines. It's Docket No. 99-056. Are the applicants, Louisville Gas and Electric Company and Kentucky Utilities, ready to proceed?

MR. RIGGS:

We are, Your Honor.

HEARING OFFICER SHAPIRO:

And we have two intervenors here in this case. One is the Attorney General of Kentucky. Are you ready to proceed?

MS. BLACKFORD:

Yes, Your Honor.

HEARING OFFICER SHAPIRO:

And I don't believe Kentucky Industrial Utility Consumers are here today; is that correct?

MR. RIGGS:

That's correct. They're not present in the room, Your Honor.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

And is Commission staff ready to proceed?

MR. RAFF:

Yes, Your Honor.

HEARING OFFICER SHAPIRO:

Let me have appearance of counsel, first, for the applicants.

MR. RIGGS:

Thank you, Your Honor. For the applicants, Louisville Gas and Electric Company and Kentucky Utilities Company, Kendrick Riggs and Lauren Anderson with the firm of Ogden, Newell & Welch, Louisville, Kentucky, and Mr. Mike Beer, in-house counsel for Louisville Gas and Electric Company.

HEARING OFFICER SHAPIRO:

How do you spell the last name of Mr. Beer?

MR. RIGGS:

B-e-e-r.

HEARING OFFICER SHAPIRO:

Is it Michael?

MR. RIGGS:

Michael or Mike.

HEARING OFFICER SHAPIRO:

And for the Attorney General?

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MS. BLACKFORD:

Elizabeth Blackford, 1024 Capital Center Drive,  
Frankfort.

HEARING OFFICER SHAPIRO:

And for the Commission staff?

MR. RAFF:

Richard Raff.

HEARING OFFICER SHAPIRO:

Are there any preliminary matters that need to be  
addressed at this time?

MR. RIGGS:

Yes, Your Honor, there are two housekeeping matters I  
would like to address at this time. First, Your Honor,  
I have with me the certificate of proof of notice of  
this hearing. I would like to ask that this be entered  
into the record and admitted as Applicants Exhibit 1.

HEARING OFFICER SHAPIRO:

Any objection?

MR. RAFF:

No.

HEARING OFFICER SHAPIRO:

So ordered.

APPLICANTS EXHIBIT 1

MR. RIGGS:

Thank you, Your Honor. The second matter, Your Honor,

1 concerns the motion made by the joint applicants on  
2 April 1 for leave to amend their application and revise  
3 their testimony. That was done in connection with the  
4 Commission Order requesting information from the  
5 companies and that motion has not been acted upon by  
6 the Commission, and I would ask that the Examiner grant  
7 the motion.

8 HEARING OFFICER SHAPIRO:

9 Is there any objection to the motion, Ms. Blackford?

10 MS. BLACKFORD:

11 No.

12 HEARING OFFICER SHAPIRO:

13 So ordered.

14 MR. RIGGS:

15 Thank you, Your Honor.

16 HEARING OFFICER SHAPIRO:

17 Okay. Do you want to call your first witness?

18 MR. RIGGS:

19 Yes, Your Honor, if you please. Our witnesses today  
20 are Mr. Ronald L. Willhite, Vice President of  
21 Regulatory Affairs for LG&E and KU; Mr. H. Bruce Sauer,  
22 Manager of Forecasting and Marketing Analysis for LG&E  
23 and KU; Mr. James W. Kasey, former Senior Vice  
24 President of LG&E Marketing, Inc.; and Mr. Lonnie E.  
25 Bellar, Manager of Generation Systems Planning for LG&E

1 and KU. In addition, we have present in the Hearing  
2 Room this morning Mr. Mike Robinson, Controller, and  
3 Ms. Caryl M. Pfeiffer, Director of Environmental  
4 Affairs. They are available for any questions  
5 concerning the information filed in response to their  
6 Requests for Information. The company calls Mr.  
7 Willhite.

8 HEARING OFFICER SHAPIRO:

9 Mr. Willhite, do you want to come around, please?

10 WITNESS SWORN

11 The witness, RONALD L. WILLHITE, after having been  
12 first duly sworn, testified as follows:

13 DIRECT EXAMINATION

14 BY MR. RIGGS:

15 Q. Please state your name and business address.

16 A. Ronald L. Willhite, 220 West Main Street, Louisville,  
17 Kentucky 40202.

18 Q. Did you cause to be prepared and filed with the  
19 Commission on February 11 an Application of eight pages  
20 and five Exhibits and testimony consisting of 14 pages  
21 and an appendix marked "A"?

22 A. Yes, I did.

23 Q. In connection with a Request for Information from the  
24 Commission, did you cause to be prepared and filed with  
25 the Commission on April 1 an Amended Application

1           amending Paragraph No. 6 entitled "Permits from Public  
2           Authorities" and revised testimony consisting of one  
3           page that revises Lines 13 through 24 on Page 12 of  
4           your original testimony and Lines 1 through 3 of Page  
5           13 of your original testimony . . .  
6       A.     Yes.  
7       Q.     . . . filed on February 11?  
8       A.     Yes, I did.  
9       Q.     Does the Application as amended request the relief  
10           sought by the companies in this case?  
11       A.     Yes, it does.  
12       Q.     Subject to the revisions in your testimony, do you  
13           affirm and adopt your testimony today?  
14       A.     Yes, I do.  
15       Q.     Would you briefly state what action the Commission  
16           should take on the joint application of LG&E and KU in  
17           this case?  
18       HEARING OFFICER SHAPIRO:  
19                 Well, wait a minute.  What was the question?  
20       MR. RIGGS:  
21                 Pardon?  
22       HEARING OFFICER SHAPIRO:  
23                 What was the question?  
24       MR. RIGGS:  
25                 I said, "Could you briefly state what action the

1 Commission should take on the joint application of  
2 LG&E and KU in this case?"

3 HEARING OFFICER SHAPIRO:

4 Well, isn't that in the prefiled testimony?

5 MR. RIGGS:

6 Yes, it is.

7 HEARING OFFICER SHAPIRO:

8 Well, we don't need that again.

9 MR. RIGGS:

10 I'll withdraw that, and Mr. Willhite is available  
11 for questions, Your Honor.

12 HEARING OFFICER SHAPIRO:

13 Okay. Ms. Blackford?

14 CROSS EXAMINATION

15 BY MS. BLACKFORD:

16 Q. Good morning, Mr. Willhite.

17 A. Good morning.

18 Q. In Response to the Attorney General's Request, Item 13,  
19 you stated that, in your testimony at Page 11 where you  
20 say that the price of a combustion turbine is expected  
21 to continue to rise, about that statement, you say that  
22 it is general in nature. Can you please give me the  
23 basis for your statement?

24 A. Well, we find ourselves today in a seller's market as  
25 compared to a buyer's market that we had experienced in

1 the past. Given the pressures brought about by the  
2 seller's market and the principles of supply and  
3 demand, it was my expectation that, until this problem  
4 with the seller's market was relieved, that we would  
5 continue to see upward pressure on the prices of  
6 capacity.

7 Q. What is the duration of the market that you would  
8 expect? What is the duration in the seller's market?

9 A. I think it's going to be difficult to know for certain,  
10 but it certainly is not going to disappear in the near  
11 term.

12 Q. What do you consider to be the near term?

13 A. This summer and maybe even next. If you'll notice in  
14 the trade press, many companies are out procuring or  
15 attempting to procure combustion turbines, and they're  
16 having great difficulty in doing that and particularly  
17 for this summer, which is almost unheard of, and then  
18 even the year 2000 and 2001.

19 Q. And so the crunch is expected to last through 2000-2001  
20 is what you're saying?

21 A. That is my expectation; yes.

22 Q. And, during that period, I presume that every  
23 combustion turbine available will be placed into  
24 service essentially. Will that diminish the crunch?  
25 Have you any idea how many are out there available to

1           be placed?

2   A.    I haven't made any analysis of that.  Our Planning  
3           personnel, Mr. Bellar, would be more knowledgeable  
4           about the availability of capacity.  What I've taken  
5           note of is what's been reported in the trade press and  
6           what appears to me to be a very difficult situation in  
7           availability of combustion turbines to meet the growing  
8           loads that we're experiencing.  Particularly here in  
9           the Commonwealth and in the service territory of KU and  
10          LG&E, we are experiencing significant growth in our  
11          loads, and we see that across all sectors, and so it's  
12          a matter of when there becomes a matching of the supply  
13          and demand.

14   Q.    And you don't really have any idea when those two will  
15          match?

16   A.    I don't.

17   Q.    Or when the market would change?

18   A.    I don't have any precise time frame, because I have not  
19          made such a study.  I think Mr. Bellar and Mr. Kasey,  
20          both, who deal in matters like this on a day-to-day  
21          basis, could be more informative to you.

22   Q.    All right.  Thank you.  In the Attorney General's  
23          Information Request, Item 10, you were asked the  
24          results of your RFP to determine the present cost of  
25          combustion turbines and to see if you are correct that

1 the cost of combustion turbines have continued to rise  
2 since you bought the ones at issue in this particular  
3 hearing. You gave the response that that information  
4 was confidential. Without violating that  
5 confidentiality, can you tell me, in general and  
6 without getting into specifics of any bid, whether that  
7 price is higher than or lower than the \$280 per  
8 kilowatt that you paid for the two units in this case?  
9 A. Would you repeat the AG Request number?  
10 Q. Sure. Item 10.  
11 A. Item 10. I don't have Item 10 with me.  
12 MR. RIGGS:  
13 Mr. Bellar is the witness for that Response.  
14 MS. BLACKFORD:  
15 I'm sorry?  
16 MR. RIGGS:  
17 Mr. Bellar is the witness for that Response.  
18 MS. BLACKFORD:  
19 I'll address it to him, then.  
20 Q. I am correct that LG&E Capital needed to get EWG status  
21 in order to operate these CTs before any certificate  
22 issues in this case; is that correct, if a certificate  
23 does not issue or before one issues in this case?  
24 A. Well, it's a matter that, for LG&E Capital to operate  
25 the units, they would have to have EWG status, which

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

has been obtained.

Q. It has been obtained?

A. That's correct.

Q. Do you have any quantification of the cost of obtaining that status?

A. I do not; no. It would have involved the filing with the Federal Energy Regulatory Commission, and so it would involve the amount of legal effort that would have been required to develop and submit that filing to the FERC.

Q. If a certificate issues in this case and the CTs are transferred to KU and LG&E, will that cost be passed along as a part of the cost of these CTs?

A. My understanding is that it would be. It's a cost incurred with making available these CTs for the benefit of our Kentucky consumers.

Q. If you would follow a standard or heretofore standard procedure of getting a certificate in advance of purchasing the CTs, there would be no such cost; is that correct?

A. I would agree with that; yes.

Q. Did you assist Mr. Bellar in putting together the projections of power prices found in the Resource Assessment that is in Exhibit LEB-2?

A. No, ma'am.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MS. BLACKFORD:

I skipped right into the next witness. I'm sorry.

A. Okay.

MS. BLACKFORD:

Thank you. That's all of my questions.

A. All right.

HEARING OFFICER SHAPIRO:

Mr. Raff?

CROSS EXAMINATION

BY MR. RAFF:

Q. Good morning, Mr. Willhite.

A. Good morning.

Q. Would you turn to your Response to the Commission's April 9, 1999, Order, Item 1c., please?

MS. BLACKFORD:

Mr. Raff, would you repeat that, please?

MR. RAFF:

April 9 Order, Item 1c.

A. Yes, I have it.

Q. In this Response, you state LG&E Capital Corp. is not being subsidized by KU at this time because LG&E Capital Corp. owns and is constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for a Certificate of Convenience and Necessity and a Certificate of Environmental Compatibility. Do

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

you see that?

A. Yes.

Q. Can you explain what you mean when you said, ". . . is constructing the combustion turbines for the purpose of allowing LG&E and KU to apply for those certificates"?

A. Pursuant to KRS 278.020, the company recognizes that it could not begin construction, the companies being LG&E and KU, could not begin construction of combustion turbines without approval of this Commission.

Therefore LG&E Capital is undertaking that construction, and our request in this case is for the two utilities, LG&E and KU, to acquire ownership of the combustion turbines once the certificates, in this case, are granted by the Commission.

Q. Could you turn, please, to your Response to the Commission's March 16 and March 19 Orders, Item 1?

A. Okay.

Q. You indicated that LG&E Energy Corp. had directed LG&E Capital Corp. to enter into an Option Agreement with ABB for the acquisition of the combustion turbines in order to prevent the loss of the acquisition opportunity. Can you tell me whether, during the time frame of August and September of 1998, LG&E or KU had any discussions with ABB regarding the possibility of entering into an Option Agreement for the combustion

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

turbines with the contingency that regulatory approvals would be needed before a final acquisition could be accomplished?

A. Mr. Raff, I was not involved in any of the discussions with ABB. My understanding is, though, that these turbines would not have been available had that type of contingency been placed on their acquisition.

Q. Do you know who was directly involved in those discussions?

A. Mr. Lucas would have been involved and other members of his staff.

Q. If LG&E, and by that I mean the LG&E Energy Corp., had not had an unregulated affiliate which was able to sign a contract with ABB, would LG&E and KU have pursued an agreement with ABB that included a regulatory out?

A. I don't believe it's a question of whether or not the utilities would have had the desire to pursue such an agreement. It's whether or not such an agreement could be consummated given the need for these combustion turbines and the fact that other utilities in the country would have had an interest in procuring them as well.

Q. During the August/September 1998 time frame, was LG&E's and KU's internal analysis developed in sufficient detail to have supported a Certificate of Convenience

- 1 and Necessity application here at the Commission?
- 2 A. Mr. Bellar can speak more to the details of the
- 3 analysis. My understanding is that, in that time frame
- 4 of August and September, the utilities had made a
- 5 preliminary analysis that indicated that the turbines
- 6 would possibly be a viable option, but the analysis had
- 7 not been done in the detail that was ultimately
- 8 submitted to the Commission with our application on
- 9 February 11 of 1999.
- 10 Q. Were the individuals who prepared that preliminary
- 11 analysis in the August/September time frame the same
- 12 individuals who prepared the LG&E Energy Corp. analysis
- 13 in September?
- 14 A. I do not know. Mr. Bellar may be able to answer that.
- 15 Q. I assume that that preliminary analysis was done as a
- 16 result of someone becoming aware of the fact that there
- 17 were these two combustion turbines that could be
- 18 obtained at that point in time; is that true?
- 19 A. I would agree that that was the case. I mean, we're in
- 20 our planning process of evaluating our capacity
- 21 situation, and we're coming out of a period where we
- 22 have been supplying part of that need via purchased
- 23 power agreements. On top of that prior need comes the
- 24 150 megawatts of load growth that the companies are
- 25 experiencing in total each year. So, during that time

1 frame, our Planning folks would have been looking at  
2 our needs and reviewing how we could put in place  
3 resources to satisfy those needs.

4 Q. Well, had these two turbines not become available at  
5 that point in time, what were your preexisting plans  
6 for meeting this 1999 summer load?

7 A. We would have had in place the physical assets that  
8 have been in place for some time, the baseload units,  
9 the CTs at the Brown plant and the other CTS at I  
10 believe it's Cane Run and at Haepling on the KU system.  
11 We have certain purchased power arrangements that each  
12 company has with certain suppliers, and then we had the  
13 need of this load growth and the need to replace  
14 expired purchased power arrangements that had been in  
15 place during this period of the nineties. As you  
16 recall, we've been before the Commission, particularly  
17 KU, with requests similar to this to construct  
18 combustion turbines. That has continued to be the  
19 physical asset that satisfies what is the current  
20 expectation, but we're always in the analysis situation  
21 of buy versus build, and, when the situation has been  
22 in a buyer's market rather than a seller's market that  
23 we're in today, in recent years, we have been able to  
24 purchase peaking type capacity in lieu of installing  
25 other physical assets. We've had agreements with

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

Cinergy and Virginia Power and Enron and other folks during this period of time to satisfy this amount of power that we've required. So it's at this time frame we needed to replace those contracts as well as meet the increased demand that we're facing each year.

Q. So you're saying that, had these two combustion turbines not become available when they did, that you would have either renewed or entered into new purchased power contracts for the 1999 summer?

A. It's my understanding we would have been - that would have been our - what we would have been faced with in order to meet the need would be to acquire purchased power.

Q. Okay. In your Response to the Commission's March 16 and March 19 Order, Item 5, Pages 2 through 4, . . .

A. I'm sorry. I'm not - March 16 and 19?

Q. Yes.

A. And Item . . .

Q. Item 5, Pages 2 through 4.

A. Okay. You're talking about the attachment. I'm sorry.

Q. Would you agree that Paragraph 2 on Page 2 and Paragraph 3 on Page 3 imply that LG&E and KU had not yet determined as of the October 30, 1998, letter that the two combustion turbines were the best resource option for their reserve margin needs?

1 A. Would you give me those two paragraphs again?  
2 Q. Sure. Paragraph 2 on Page 2.  
3 A. Which is the first page of the letter?  
4 Q. Yes.  
5 A. Okay.  
6 Q. And Paragraph 3 on Page 3. Would you like me to repeat  
7 the question or do you . . .  
8 A. No. I think I remember; yes. As I stated earlier, the  
9 two utilities had done what was a very preliminary  
10 analysis of the feasibility of the combustion turbines  
11 and had not yet completed the detail analysis that was  
12 submitted with our application on February 11, 1999.  
13 Q. Would you also agree, based on your Response to Item 1  
14 in that same package, that LG&E and KU had, at least on  
15 a preliminary basis, decided the two combustion  
16 turbines were the best resource option back in August  
17 of 1998?  
18 A. Yes.  
19 Q. Back to Item 5, the October 30 letter, Page 3 of 4, ...  
20 A. Okay.  
21 Q. . . . and the second paragraph, you state that LG&E or  
22 KU involvement in the project will be limited to  
23 providing oversight during the construction and  
24 installation phases, and it will be performed pursuant  
25 to a service agreement. Was such a service agreement

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

ever drafted?

A. No, it was not. After having reviewed the services that were being provided and having taken note of the procedures that are in place with regard to the corporate policies and guidelines for intercompany transactions and our system of tracking costs, we did not see the need to enter into a service agreement for the construction phase.

Q. All right. Could you turn to your Response to Item - yeah, if you would turn to Response to Item 18d., please, Page 2 of 2, . . .

A. I don't have Item 18 with me.

MR. RIGGS:

That's a Response of Mr. Robinson. Let me hand it to Mr. Willhite.

MR. RAFF:

Yeah, we realize it was another witness, but Mr. Willhite should be able to answer the question.

Q. As we just discussed, your October 30 letter talked about the involvement of LG&E and KU being limited to providing oversight during construction and the installation phase. Do you recall that?

A. Yes.

Q. Would you agree that, based on the Response here, those costs, that those go beyond a mere oversight role for

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

KU personnel?

A. Yes, I would agree with that, because I think, as we got into the project and got into the actual managing of the project, there became some other ways in which for us to economize in terms of the construction of the facilities and what I'm thinking of, in particular, is that some of our substation folks have actually handled some of the work connecting the system back to the generators. I think, back in October, when we sent the letter to the Commission, we obviously were in an early stage in our consideration and our implementation of the actual construction. So, as we have worked through the process, we have obviously had to adjust.

Q. Between your October 30, 1998, letter and the filing of the application on February 11, was there any written contact with the Commission informing them of any changes in the scope of the work as outlined in your letter for the LG&E or KU personnel?

A. No, there was not, but, Mr. Raff, we would view our operation under the corporate guidelines where the services are provided between the two regulated utilities as well as the regulated utilities and the LG&E Energy Corporation. Those kind of transactions transpire almost on a daily basis, and we prepare and submit filings to the Commission of those transactions.

1 Q. In your Response to the Commission's April 9, 1999,  
2 Order, Items 1 and 5, you state that LG&E Capital Corp.  
3 is not being subsidized by KU?  
4 A. Correct.  
5 Q. Given the financial arrangements currently in place for  
6 the combustion turbine project, is LG&E Capital Corp.  
7 subsidizing KU or LG&E?  
8 A. At this time, I can't think of a way in which they  
9 would be. When the Commission approves our request,  
10 LG&E Capital Corp. will be reimbursed for their costs  
11 incurred in purchasing and putting in place the  
12 combustion turbines up to the point in time when the  
13 transaction occurs.  
14 Q. Do you know the date that the FERC issued its Order  
15 granting EWG status for the LG&E Capital Corp.?  
16 A. I do not, Mr. Raff. I did not bring that Order with  
17 me, but we certainly can . . .  
18 Q. If you could maybe . . .  
19 A. . . . provide it to you by this afternoon because . . .  
20 Q. . . . provide a copy of the - if it was an Order or a  
21 letter.  
22 A. Yes. Yes, we could do that and maybe - well, we could  
23 provide you the letter or Order; yes.  
24 Q. And do you know the current status of the request to  
25 sell power at market-based rates? Do you know if that

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

was granted, too?

A. It's my understanding that it has been.

Q. And a copy of that Order if it's not in the same Order as the . . .

A. Okay.

Q. . . . EWG status?

A. Yeah, they were different applications.

MR. RAFF:

Thank you, Mr. Willhite. No further questions.

HEARING OFFICER SHAPIRO:

Any redirect?

MR. RIGGS:

None, Your Honor.

HEARING OFFICER SHAPIRO:

Thank you, Mr. Willhite.

MR. RIGGS:

The company calls Mr. Sauer, please.

WITNESS SWORN

1                   The witness, H. BRUCE SAUER, after having been  
2 first duly sworn, testified as follows:

3                                   DIRECT EXAMINATION

4 BY MR. RIGGS:

5 Q.     Would you please state your name and business address?

6 A.     H. Bruce Sauer. My business address is 220 West Main  
7 Street, Louisville, Kentucky 40202.

8 Q.     Mr. Sauer, did you cause to be prepared and filed with  
9 the Commission, on February 11, 1999, written testimony  
10 consisting of five pages and three Exhibits?

11 A.     I did.

12 Q.     Do you have any corrections to your testimony?

13 A.     I do. I have two corrections to enter into the record,  
14 both of which affect Table 3 on Page 4 of Exhibit HBS-  
15 2, and one correction that affects Table 8 on Page 9 of  
16 Exhibit HBS-2. The first correction is at each of the  
17 forecasted summer . . .

18 MR. RAFF:

19                   I'm sorry. I'm sorry. Which Exhibit are we on,  
20 first?

21 A.     Table 3, Page 4, on Exhibit HBS-2.

22 HEARING OFFICER SHAPIRO:

23                   Okay. Let's give everybody a chance to get to  
24 that. Table 3, Exhibit . . .

25 A.     Page 4, Exhibit HBS-2.

1 HEARING OFFICER SHAPIRO:

2 At Table 3, you said?

3 A. Table 3, yes. Okay. The first correction is that each  
4 of the forecasted summer peak demands for LG&E, as  
5 shown on Table 3, should be increased by seven  
6 megawatts due to my use of a preliminary forecast when  
7 creating that table, and any numerical references to  
8 the LG&E forecasted peak in the paragraph below Table 3  
9 should also be increased by seven megawatts.

10 HEARING OFFICER SHAPIRO:

11 Could you go through that again?

12 A. Sure. Every number in the Table 3 should be increased  
13 by seven megawatts.

14 HEARING OFFICER SHAPIRO:

15 That's both the summer peak and the growth - well,  
16 just the summer peak?

17 A. No, sir, just the megawatt values.

18 Q. Please proceed.

19 A. Okay. The second correction involves the growth rate  
20 for 1999 that is shown in both Table 3, which is where  
21 you are, and also on Table 8 of the Exhibit HBS-2. In  
22 each of those cases, I used preliminary estimates for  
23 the 1998 summer peak, and, on correction, those growth  
24 rates should show .7 percent for the LG&E value in  
25 Table 3 and 1.25 percent in Table 8.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

Q. Subject to these corrections, do you affirm and adopt your testimony today?

A. Yes, I do.

MR. RIGGS:

I understand the Examiner's preference would be for no summaries of the testimony; is that correct?

HEARING OFFICER SHAPIRO:

Right.

MR. RIGGS:

Mr. Sauer is now available for any questions.

HEARING OFFICER SHAPIRO:

Okay. Ms. Blackford?

MS. BLACKFORD:

I have no questions. Thank you.

HEARING OFFICER SHAPIRO:

No questions. Mr. Raff?

CROSS EXAMINATION

BY MR. RAFF:

Q. Maybe a clarification, Mr. Sauer. Are you saying that the Table 3, the growth rate, rather than being 4.57 percent, should be .7 percent.

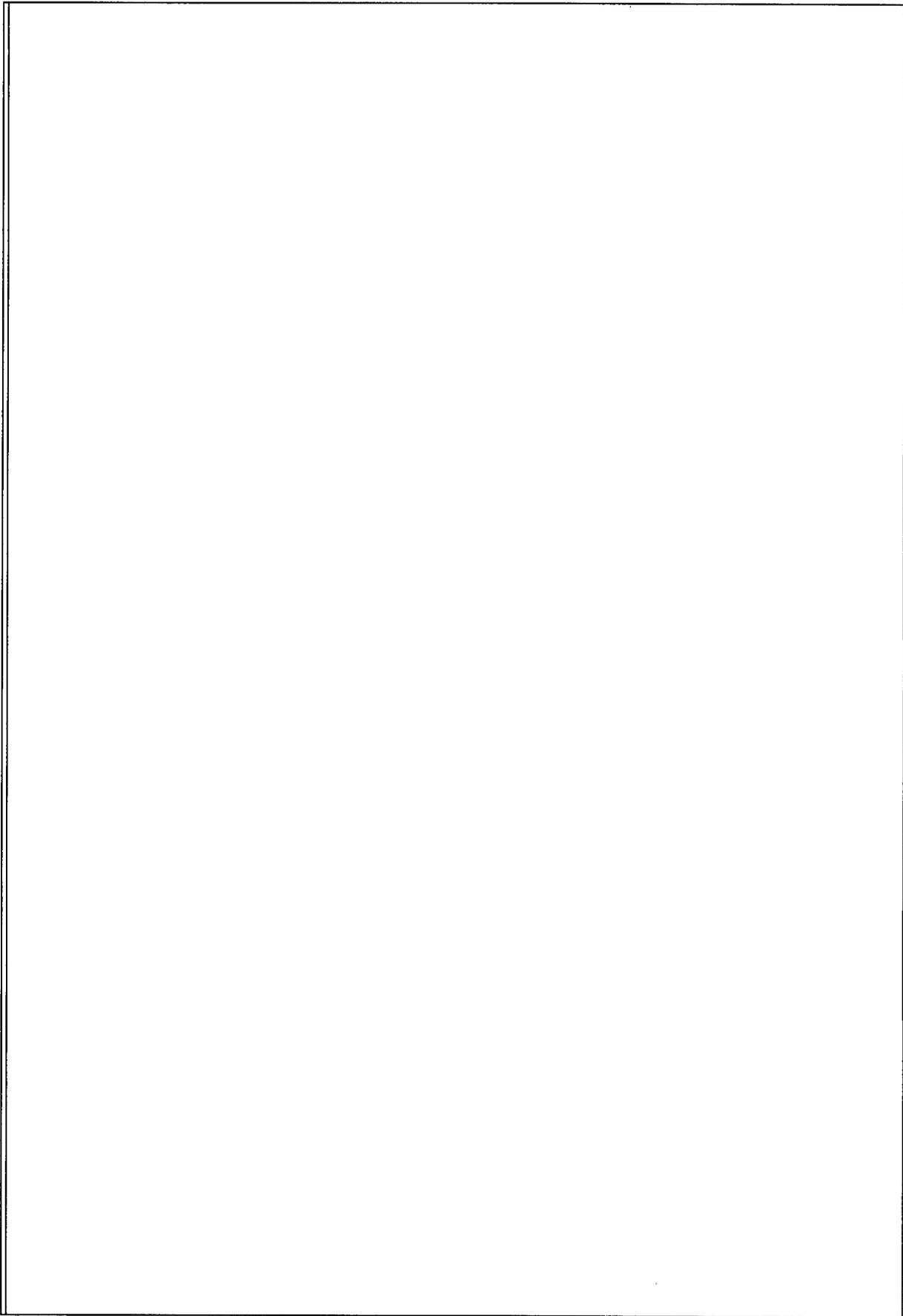
A. Point seven percent, yes.

Q. And, again, the reason for this what would appear to be . . .

- 1 A. Well, the reason is that the table presents forecasted  
2 demands that are after interruptible load, and they  
3 are, of course, developed on a weather normalized  
4 basis. So, there's two components to the 1998 value;  
5 one is what is the weather normalized value for '98,  
6 and the other is what is the estimated interruptible  
7 load that has to be taken out of the 1998 value. In  
8 both cases, I had preliminary estimates of those, and I  
9 had to revise them.
- 10 Q. Does that not affect subsequent years' growth rates?
- 11 A. No, sir, I don't believe it does. It's just correcting  
12 1998 actuals where they came in. The forecast, as it  
13 stands, is not affected by that.
- 14 Q. Well, if your 1999 growth rate is only .7 percent, why  
15 in the year 2000 would it be 3.37 percent?
- 16 A. Well, the 2000 figure . . .
- 17 Q. That's almost, what, five times?
- 18 A. Yeah. The 2000 figure is affected by the loss of about  
19 30 megawatts of interruptible load to the company, to  
20 LG&E. So that increases the summer peak more than  
21 would otherwise be the case and '98 came in higher,  
22 weather normalized higher, than we had expected it to.  
23 So that narrows the difference between 1998 and 1999.
- 24 Q. Why will there be a loss of 30 megawatts of inter-  
25 ruptible load?

1 A. One of the customers that's on an interruptible  
2 contract is dropping.  
3 Q. Who is that?  
4 A. I think it is Ford, but I would have to double-check on  
5 that.  
6 Q. And do you know why they're dropping the interruptible?  
7 A. No, sir, I don't.  
8 Q. I'm sorry. I didn't hear you.  
9 A. I said, "No, sir, I don't."  
10 Q. Is the company not projecting any additional inter-  
11 ruptible load to replace the Ford load?  
12 A. Not to replace the Ford load. There's 93 megawatts of  
13 interruptible load that is assumed throughout the  
14 forecast. There's 123 that's built into the 1999  
15 estimate and 93 for every year thereafter. That's just  
16 for the LG&E system.  
17 Q. Do you know how aggressively LG&E and KU try to market  
18 their interruptible load?  
19 A. No, sir, I don't.  
20 Q. Is it something you think ought to be aggressively  
21 marketed?  
22 A. My responsibility is to develop a baseline forecast,  
23 sir. I can't speak to that.  
24 Q. Well, as part of your duties, do you tell people that  
25 the more interruptible load they have the lower the

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25



**CONNIE SEWELL**  
COURT REPORTER  
1705 SOUTH BENSON ROAD  
FRANKFORT, KENTUCKY 40601  
(502) 875-4272

1 baseline projections would be?

2 A. I think that that's understood by the Planning staff.

3 Again, I just have to take what's under contract and

4 build it into my forecast.

5 Q. And, again, this 30 megawatts of the loss of

6 interruptible, is that 30 megawatts that the company is

7 just losing, period, or is it going from interruptible

8 to firm?

9 A. It's, in effect, going from interruptible to firm.

10 That's what's happening.

11 Q. Okay. And this table is just LG&E; correct?

12 A. That's correct.

13 Q. And then the correction that you made to Table 8, does

14 that merely reflect the carry through of that

15 correction to the combined growth rate, or is there

16 something else that . . .

17 A. On the growth rate, you know, the correction carries

18 forward for both of those tables because of the 1998

19 correction, but the megawatt values shown in Table 8

20 are correct. They were correct all along.

21 Q. But there's no change in the KU growth rate for 1999?

22 A. No. This was an LG&E correction only.

23 MR. RAFF:

24 Okay. Thank you, Mr. Sauer, no other questions.

25 A. Thank you.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

HEARING OFFICER SHAPIRO:

Any redirect?

MR. RIGGS:

None, Your Honor. Thank you.

HEARING OFFICER SHAPIRO:

Thank you, Mr. Sauer.

MR. RIGGS:

The company will call Mr. James Kasey.

HEARING OFFICER SHAPIRO:

Okay. Mr. Kasey, do you want to come around,  
please?

WITNESS SWORN

The witness, JAMES W. KASEY, after having been  
first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. RIGGS:

Q. Would you please state your name and current business  
address?

A. My name is James W. Kasey. I'm at 3650 National City  
Tower, 101 South Fifth Street, Louisville, Kentucky.

Q. Mr. Kasey, did you cause to be prepared and filed with  
the Commission, on February 11, 1999, written testimony  
consisting of eight pages and an appendix marked "A"?

A. I did.

Q. Since then, have you changed employment?

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

A. I have. Upon my retirement from LG&E on February 6, 1999, I joined The ERORA Group as a principal participant. The ERORA Group is an energy advisory service and distributed generation development organization, and, as of this time, I am providing services to LG&E/KU in this case.

Q. Are the current option prices for power significantly different than those used in the Resource Assessment mentioned in your testimony?

A. They are not.

Q. Subject to your comments, do you adopt and affirm your testimony today?

A. I do.

MR. RIGGS:

Your Honor, I ask that Mr. Kasey's testimony and the testimony of Mr. Willhite and Mr. Sauer be admitted into evidence.

HEARING OFFICER SHAPIRO:

So ordered.

MR. RIGGS:

Mr. Kasey is now available for any questions.

HEARING OFFICER SHAPIRO:

Ms. Blackford?

CROSS EXAMINATION

1  
2 BY MS. BLACKFORD:

3 Q. Good morning, Mr. Kasey.

4 A. Good morning.

5 Q. Did you assist Mr. Bellar in putting together the  
6 projections of power prices found in the Resource  
7 Assessment, Exhibit LEB-2, Appendix A, 5 of 10?

8 A. We did; yes.

9 Q. In that assessment, prices appear to go up over time in  
10 almost every year, including the early years that are  
11 forecasted; am I correct about that?

12 A. They go up in the early years, and then they decline in  
13 the latter years, is my recollection of those numbers.

14 Q. In your Response to the Attorney General Information  
15 Request, Item 16 - do you have that before you?

16 A. I can get that. I do.

17 Q. Well, first - I'm sorry - let me hark back to that  
18 Appendix A. Would you please tell me where the prices  
19 start to go down in later years?

20 A. I believe that, from my recollection and I'm actually  
21 looking at the table, 1999 reflects the most  
22 volatility. In 2000, we see reduced volatility. So we  
23 see lower average numbers and that continues through  
24 the 2001 period.

25 Q. Are you on Table 1 of . . .

1 A. Help me where I'm supposed to be.  
2 Q. I'm sorry. I may have confused you. Are you on Table  
3 1 of Appendix A of LEB-2?  
4 A. Which is?  
5 Q. That would be the . . .  
6 A. Help me out.  
7 Q. . . . Resource Assessment that you helped prepare.  
8 A. Oh, I don't have a copy of that. I was looking at the  
9 AG Response.  
10 Q. Certainly.  
11 A. I apologize.  
12 Q. I'm sorry. I had you confused. I turned you to  
13 something and then asked about something else.  
14 MR. RIGGS:  
15 Ms. Blackford, . . .  
16 MS. BLACKFORD:  
17 Yes.  
18 MR. RIGGS:  
19 . . . I'm sorry. Were you addressing the question  
20 to me or . . .  
21 MS. BLACKFORD:  
22 No.  
23 HEARING OFFICER SHAPIRO:  
24 She was addressing a question . . .  
25

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MR. RAFF:

I think the witness needs an Exhibit.

HEARING OFFICER SHAPIRO:

Right. She was addressing a question to the witness for LEB-2; is that right?

MS. BLACKFORD:

That's correct.

Q. Table 1 on Appendix A, Page 5 of 10.

A. Okay. Page 5 of 10?

Q. Yes, sir. Given the confusion, let me go back to my original question and how I thought I heard you respond to it. What I'm trying to do is clarify whether I heard the response correctly. I had first asked you if, in that projection, prices appear to go up steadily over the years, and your answer was, in the early years, yes, but, in the latter years, you thought they began to decline, and so what I'm trying to clarify is where on that table it shows that they begin to decline.

A. Well, obviously, these tables do not decline. I did not give numbers out this far to them. There are some other projections that have been made, but we actually have provided the numbers through the early 2000 period . . .

Q. I see.

1 A. . . . and that's what I was speaking to in my testimony  
2 as far as there's liquid markets, because the liquidity  
3 of the market does not go beyond 2006-2007.

4 Q. So, in your . . .

5 A. So that was the numbers that were provided, and these  
6 are projections from those numbers, and, in general, a  
7 growth factor in those prices were carried out from  
8 that point to the latter years going out to 2027.  
9 Obviously, there's no liquidity in the market out in  
10 these numbers. So these are projections.

11 Q. And your input into it ceased with approximately 2000  
12 into this table?

13 A. I think actually we gave the numbers out in the 2004  
14 period to the liquidity of the market at the time we  
15 put in the testimony.

16 Q. All right. Through 2003, which I gather is in the  
17 period of your input, there is no decline in the  
18 pricing, is there, or in the numbers?

19 A. No, but it certainly is within the range of the numbers  
20 that we have seen in the marketplace during this  
21 period. The \$100 to \$150 range is certainly a range  
22 that we've seen for transactions that have actually  
23 occurred during this period. The market is rather thin  
24 in that area, and we don't see a lot of transactions,  
25 but, since I put my testimony in, I think I gave a

1 range, on Page 6 of my testimony, of \$100 to \$150.  
2 That range still continues and is kind of what we're  
3 seeing in the market if you buy a package for this  
4 period. Now, obviously, those numbers sometimes have  
5 been higher, and they've sometimes been lower than that  
6 but that range has been maintained.

7 Q. And, by "this period," you mean for 2003?

8 A. Out through 2003, yes.

9 Q. All right. Thank you. Now, we are done with that  
10 table. If we can turn to your Response to the Attorney  
11 General Information Request, Item 16, am I correct in  
12 stating that that Exhibit shows that the bid price for  
13 July and August of '99 was \$104, and then it declined  
14 to \$80 for July and August of 2000 and down to \$70 for  
15 July and August of 2001?

16 A. Yeah. The bid ask spread moved from \$104 to \$110 to  
17 \$80 to \$86 and \$70 to \$77; that's correct.

18 Q. And these are actual bid prices?

19 A. Yes, they were at the time which we responded to this  
20 interrogatory.

21 Q. Why didn't that original table we looked at reflect the  
22 declining prices?

23 A. Well, these are very specific off of the price sheets  
24 that you get from brokers, but the range of prices are  
25 still within the numbers in which they have used in

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

themselves throughout the period in which they install that capacity. We've got about 1,100 megawatts of merchant capacity that's being proposed here for the State of Kentucky, and they are all predicated on what they think the forward markets will bring.

Q. As I understand it, if this certificate is not approved, then these two CTs will be also merchant plants; is that correct?

A. That's correct. That's my understanding as well.

Q. So they're being built and sustained at that same price that the other merchant plants are being built and sustained?

A. You would only have to make that assumption that certainly two of the biggest players, the biggest market participants in the country, are building those plants. So you would assume they're smart enough that they're making a good investment.

MS. BLACKFORD:

Thank you. That's all of my questions.

A. Uh-huh.